CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

india

1980

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

INDIA

A REFERENCE ANNUAL

1980

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

INDIA

A REFERENCE ANNUAL

1980

Compiled by

RESEARCH AND REFERENCE DIVISION
MINISTRY OF INFORMATION AND BROADCASTING
GOVERNMENT OF INDIA

PUBLICATIONS DIVISION
MINISTRY OF INFORMATION AND BROADCASTING
GOVERNMENT OF INDIA

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

September 1980 (*Bhadra* 1902)

© PUBLICATIONS DIVISION 1980

Price :—Rs. 36.00

PUBLISHED BY THE DIRECTOR PUBLICATIONS DIVISION
MINISTRY OF INFORMATION AND BROADCASTING
GOVERNMENT OF INDIA PATIALA HOUSE
NEW DELHI-110001

Sales Emporia ● Publications Division

SUPER BAZAR (2nd Floor) CONNAUGHT CIRCUS NEW DELHI-110001
COMMERCE HOUSE CURRIMBHOY ROAD BALLARD PIER BOMBAY-400038
8 ESPLANADE EAST CALCUTTA-700069
SHASTRI BHAVAN 35 HADDOWS ROAD MADRAS-600006
BIHAR STATE CO-OPERATIVE BANK BUILDING ASHOK RAJPATH PATNA-800004
NEAR GOVERNMENT PRESS PRESS ROAD TRIVANDRUM-695001

PRINTED AT GOVERNMENT OF INDIA PRESS FARIDABAD

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

PREFACE

INDIA 1980 is the twenty-sixth edition of the Reference Annual, compiled and edited by the Research and Reference Division of the Ministry of Information and Broadcasting. The Annual contains information on diverse aspects of our national life and activities, collected from official and other authentic sources. The book is an established work of reference but it does not claim to be comprehensive.

The publication is a rich source of material for research scholars, students, officials, journalists, academicians, professionals, etc. Each chapter is revised annually and (within the limits of space) every effort is made to provide information as fully and clearly as possible. However, in the nature of things, a Reference Annual, which takes about 12 months from collection of material to final printing, cannot be completely uptodate.

The publication attempts to describe the machinery of government and other institutions which play a vital role in nation building activities and help transform the Indian traditional social life into a modern society. It documents the progress achieved in various spheres of activities such as education, health, social welfare, transport, communications, science and technology, rural reconstruction, labour, housing, industry, commerce, agriculture, power generation and other aspects of the national life.

Three maps—showing the main rail-links, national highways and important tourist centres and air-links—besides a political map and a few charts highlighting the achievements in the fields of industry, agriculture etc., have been included.

In the Appendices, the list of Indian diplomats abroad and foreign diplomats in New Delhi is updated as on 5 May 1980. Personnel of the government at the Centre has been revised as on 9 June 1980. The 'Important Events' chapter covers developments from January to the end of December 1979.

Factual and statistical information given in the Annual is compiled with the cooperation of the central ministries,

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

departments, state governments, union territories and other organisations.

For the convenience of readers seeking more details on specific topics, a bibliography is given at the end of the book.

The text generally covers information up to January 1980. In some cases, however, changes that occurred later, are also incorporated.

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

CONTENTS

1	Land and the People	1
2	National Symbols	15
3	Government	17
4	Defence	35
5	Education	45
6	Cultural Activities	62
7	Scientific Research	73
8	Health	98
9	Social Welfare	113
10	Mass Communication	134
11	Basic Economic Data	167
12	Finance	177
13	Planning	201
14	Agriculture	207
15	Rural Reconstruction	245
16	Civil Supplies and Co-operation	259
17	Energy	276
18	Industry	294
19	Commerce	337
20	Transport	352
21	Communications	373
22	Labour	381
23	Housing	401
24	Justice and the Law	409
25	States and Union Territories	435
26	Important Events	486

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

APPENDICES	499
PERSONNEL OF THE GOVERNMENT	499
MEMBERS OF PARLIAMENT	500
CIVILIAN AWARDS	515
GALLANTRY AWARDS	515
DISTINGUISHED SERVICE AWARDS	516
UNIVERSITIES IN INDIA	517
LALIT KALA AKADEMI AWARDS	521
SANGEET NATAK AKADEMI AWARDS AND FELLOWSHIPS	521
SAHITYA AKADEMI AWARDS	521
NATIONAL AWARDS FOR FILMS	522
FOREIGN DIPLOMATIC REPRESENTATIVES IN INDIA	526
INDIA'S REPRESENTATIVES ABROAD	530
BIBLIOGRAPHY	546
INDEX	563
ADVERTISEMENTS	

KEY TO NUMERATION

1 lakh = One hundred thousand
10 lakh = 1 million
1 crore = 10 million

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

INDIA

KILOMETRES
100 0 500

N

USSR
AFGHANISTAN
PAKISTAN
CHINA
TIBET
NEPAL
SIKKIM
BHUTAN
BANGLADESH
BURMA
SRI LANKA
INDIA

JAMMU AND KASHMIR
SRINAGAR
Jammu
HIMACHAL PRADESH
SIMLA
Amritsar
Jullundur
Ludhiana
PUNJAB
CHANDIGARH
Patiala
Ambala Cantt.
Dehra Dun
Saharanpur
Muzaffarnagar
Meerut
Moradabad
Rampur
Bareilly
HARYANA
Rohtak
DELHI
Ghaziabad
Aligarh
Shahjahanpur
Farrukhabad-cum-Fatehgarh
Mathura
Agra
Firozabad
Bikaner
Alwar
RAJASTHAN
JAIPUR
Jodhpur
Ajmer
Kota
Jhansi
Gwalior
Kanpur
UTTAR PRADESH
LUCKNOW
Gorakhpur
Faizabad
Muzaffarpur
Darbhanga
Allahabad
Varanasi
PATNA
Monghyr
Biharsharif
Bhagalpur
Mirzapur-cum-Vindhyachal
Gaya
Udaipur
GUJARAT
GANDHINAGAR
Ahmadabad
Nadiad
Vadodara
Jamnagar
Rajkot
Porbandar
Bhavnagar
Surat
DAMAN (GD&D)
DIU (GD&D)
DNH
SILVASSA
Thane
BOMBAY
Ratlam
Ujjain
Indore
Sagar
BHOPAL
Jabalpur
MADHYA PRADESH
Burhanpur
Bhusawal
Dhulia
Jalgaon
Malegaon
Amravati
Akola
Nagpur
Durg-Bhilainagar
Bilaspur
Raipur
Rourkela
Sambalpur
BIHAR
Dhanbad
Bokaro
Asansol
Durgapur
Barddhaman
Ranchi
Jamshedpur
Kharagpur
CALCUTTA
ORISSA
Cuttack
BHUBANESHWAR
Berhampur
WEST BENGAL
Visakhapatnam
Rajahmundry
HYDERABAD
Warangal
Nizamabad
Kakinada
YANAM (P)
Eluru
Vijayawada
Guntur
Tenali
Machilipatnam (Krishna)
ANDHRA PRADESH
Kurnool
Nellore
Kolar Gold Fields
MADRAS
Kanchipuram
Vellore
TAMIL NADU
PONDICHERRY (P)
Cuddalore
Kumbakonam
KARAIKAL (P)
Thanjavur
Tiruchirapalli
Dindigul
Salem
Erode
Tiruppur
Coimbatore
Mysore
MAHE (P)
Kozhikode
KERALA
KAVARATTI
LAKSHADWEEP (India)
LAKSHADWEEP SEA
Cochin
Alleppey
Quilon
TRIVANDRUM
Nagercoil
Tirunelveli
Tuticorin
Madurai
MAHARASHTRA
Solapur
Sangli
Gulbarga
Kolhapur
Bijapur
Belgaum
Dharwar
Hubli
Bellary
PANAJI
GOA (GD&D)
KARNATAKA
Davanagere
Shimoga
Bhadravati
BANGALORE
Mangalore
Pune
Ahmednagar
Nasik
Aurangabad
Nanded
Ulhasnagar
ARABIAN SEA
BAY OF BENGAL
INDIAN OCEAN
KBK
ARUNACHAL PRADESH
ITANAGAR
Gangtok
ASSAM
DISPUR
Gauhati
SHILLONG
M
KOHIMA
NAGALAND
MANIPUR
IMPHAL
AGARTALA
T
AIZWL
MIZORAM
ANDAMAN AND NICOBAR ISLANDS (India)
NARCONDAM I. (India)
BARREN I. (India)
PORT BLAIR
ANDAMAN SEA

CAPITAL OF COUNTRY	◉
CAPITAL (STATE / UNION TERRITORY)	◎
TOWNS AND TOWN AGGLOMERATIONS WITH POPULATION OVER ONE LAKH	•
INTERNATIONAL BOUNDARY	-·-·-
STATE BOUNDARY	----
DADRA AND NAGAR HAVELI	DNH
GOA, DAMAN AND DIU	(GD&D)
MEGHALAYA	M
PONDICHERRY	(P)
TRIPURA	T

© Government of India copyright, 1980.

Based upon Survey of India map with the permission of the Surveyor General of India.

The territorial waters of India extend into the sea to a distance of twelve nautical miles measured from the appropriate base line.

The boundary of Meghalaya shown on this map is as interpreted from the North-Eastern Areas (Reorganisation) Act, 1971, but has yet to be verified.

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

1 LAND AND THE PEOPLE

India is the seventh largest country in the world. It is well marked off from the rest of Asia by mountains and the sea, which give the country a distinct geographical unity. Bounded by the great Himalayas in the north, it stretches southwards and, at the Tropic of Cancer, tapers off into the Indian Ocean between the Bay of Bengal on the east and the Arabian Sea on the west. It covers an area of 32,87,782[1] sq km.

Lying entirely in the northern hemisphere, the mainland extends, between latitudes 8°4′ and 37°6′ north and longitudes 68°7′ and 97°25′ east and measures about 3,214 km from north to south between the extreme latitudes and about 2,933 km from east to west between the extreme longitudes. It has a land frontier of about 15,200 km and a coast line of about 6,100 km.

PHYSICAL BACKGROUND

The Himalayas and other lofty mountains—Muztagh Ata, Aghil and Kunlun mountains to the north of Kashmir and south-eastern portion of Zaskar mountains to the east of Himachal Pradesh — form India's northern boundary, except in the Nepal region. She is adjoined in the north by China, Nepal and Bhutan. A series of mountain ranges in the east separate India from Burma. Also in the east, lies Bangladesh, bounded by the Indian States of West Bengal, Assam, Meghalaya, Tripura and Mizoram. In the north-west, Afghanistan and Pakistan border on India. South of the Tropic of Cancer, the country tapers off into the Indian Ocean between the Arabian Sea on the west and the Bay of Bengal on the east. The Gulf of Mannar and the Palk Strait separate India from Sri Lanka. The Andaman and Nicobar Islands in the Bay of Bengal and Lakshadweep in the Arabian Sea are parts of the territory of India.

Physical Features

The mainland comprises four well-defined regions, namely, the great mountain zone, plains of the Ganga and the Indus, the desert region and the Southern Peninsula.

The Himalayas comprise three almost parallel ranges interspersed with large plateaus and valleys some of which, like the Kashmir and Kulu Valleys, are fertile, extensive and of great scenic beauty. Some of the highest peaks in the world are found in these ranges. The high altitudes limit travel only to a few passes, notably the Jelep La and Natu La on the main Indo-Tibet trade route through the Chumbi Valley, north-east of Darjeeling and Shipki La in Sutluj Valley north-east of Kalpa (Kinnaur). The moutain wall extends over a distance of about 2,400 km with a varying depth of 240 to 320 km. In the east, between India and Burma and India and Bangladesh, the hill ranges are much lower. The Garo, Khasi, Jaintia and Naga hills, running almost east-west, join the chain of the Mizo and Arakan hills running north-south.

Plains of the Ganga and the Indus, about 2,400 km long and 240 to 320 km broad, are formed by the basins of three distinct river systems, the Indus, the Ganga and the Brahmaputra. They are one of

[1] Provisional, as on 1 July 1971.

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

the world's greatest stretches of flat alluvium and also one of the most densely populated areas on earth. There is hardly any variation in relief. Between the Yamuna river at Delhi and the Bay of Bengal, nearly 1,600 km away, there is a drop of only 200 metres in elevation.

The desert region can be divided into two parts—the 'great desert' and the 'little desert'. The 'great desert' extends from the edge of the Rann of Kachchh beyond the Luni river northward. The whole of Rajasthan-Sind frontier runs through this. The 'little desert' extends from the Luni river between Jaisalmer and Jodhpur up to the northern wastes. Between the great and little desert lies a zone of absolutely sterile country, consisting of rocky land cut up by limestone ridges. Due to absence of surface water and very scanty rainfall the region is almost absolutely sterile.

The Peninsular plateau is marked off from the plains of the Ganga and the Indus by a mass of mountain and hill ranges varying from 460 to 1,220 metres in height. Prominent among these are the Aravalli, Vindhya, Satpura, Maikala and Ajanta. The Peninsula is flanked on one side by the Eastern Ghats, where the average elevation is about 610 metres, and on the other by the Western Ghats, where it is generally from 915 to 1,220 metres, rising in places to over 2,440 metres. Between the Western Ghats and the Araban Sea lies a narrow coastal strip, while between the Eastern Ghats and the Bay of Bengal there is a broader coastal area. The southern point of the plateau is formed by the Nilgiri hills where the Eastern and Western Ghats meet. The Cardamom hills lying beyond may be regarded as a continuation of the Western Ghats.

Geological Structure

The geological regions broadly follow the physical features and may be grouped into three well-defined regions : the Himalayas and their associated group of mountains, the Indo-Gangetic plains and the ancient Peninsular Shield.

The Himalayan mountain belt to the north and the Naga-Lushai mountains in the east are regions of mountain building movement. Much of the area, now presenting some of the most magnificent mountain scenery in the world, was under marine conditions over a period of about 60 crore years. In a series of mountain building movements, commencing about seven crore years ago, the sediments and the basements of rocks in various configurations rose to great heights. The elements worked on these to produce the relief seen today.

The Indo-Gangetic plains are a great alluvial tract that separate the Himalayas from the Peninsula to the south. The deposits of the tract belong to the latest chapter of the earth's history and conceal beneath them the southern fringes of the Himalayan formations and the northern fringes of the Peninsular formations. The thickness of the sedimentary cover in this tract exceeds 6,000 metres at places.

The Peninsula is a region of relative stability and rare seismic disturbances. Highly metamorphosed rocks of the earliest periods occur over more than half of its area the rest being covered by the coal bearing Gondwana formations, and later sediments and lava flows belonging to the Deccan Trap formation.

River Systems

The rivers in India may be classified as : (i) Himalayan rivers, (ii) Deccan rivers (iii) coastal rivers, and (iv) rivers of the inland drainage basin.

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

The Himalayan rivers are generally snow-fed and have, therefore, continuous flow throughout the year. During the monsoon months, the Himalayas receive very heavy rainfall and the rivers discharge the maximum amount of water causing frequent floods. The Deccan rivers are generally rain-fed and, therefore, fluctuate in volume. A large number of streams are non-perennial. The coastal streams, specially of the west coast, are short in length and have limited catchment areas. Most of them are non-perennial. The streams of the inland drainage basin of western Rajasthan are few and far between. Most of them are of an ephemeral character. They drain towards the individual basins or salt lakes like the Sambhar or are lost in the sands, having no outlet to the sea. The Luni is the only river of this category that drains into the Rann of Kachchh.

The Ganga basin is the largest in India receiving waters from an area which comprises about one-quarter of the total area of the country. Its boundaries are well defined by the Himalayas in the north and the Vindhya mountains in the south. The Ganga has two main headwaters in the Himalayas : the Bhagirathi and the Alaknanda, the former rising from the Gangotri glacier at Gaumukh and the latter from a glacial snout of the Alakapuri glacier. The Ganga is joined by a number of Himalayan rivers including the Yamuna, Ghaghra, Gandak and Kosi. The westernmost river of the Ganga system is the Yamuna, which rises in the Yamnotri glacier and joins the Ganga at Allahabad. Among the rivers flowing north from central India into the Yamuna or the Ganga, are the Chambal, Betwa and Sone.

The second largest river basin in India is that of the Godavari. It covers an area which comprises about 10 per cent of the total area of India. The Krishna basin is the second largest in Peninsular India. The Mahanadi flows through the third largest basin in the Peninsula. The basins of the Narmada in the uplands of the Deccan and of the Cauvery in the far south are of about the same size, though of different character and shape.

Two other river systems, which are small but agriculturally important, are those of the Tapi in the north and the Penner in the south.

Climate

The climate of India may be broadly described as tropical monsoon type. There are four seasons in India : (i) winter season (January-February); (ii) hot weather season, summer (March-May); (iii) rainy season, south-western monsoon period (June-September); and (iv) post-monsoon period, known also as north-east monsoon period in the southern Peninsula (October-December).

In India, rainfall is erratic and ill-distributed. It varies from place to place and year to year. However, there are four broad climatic regions based on rainfall. Practically the whole of Assam and its neighbourhood, the Western Ghats and the adjoining coastal strip and parts of the Himalayas are areas of very heavy rainfall with more than 2,000 mm of annual rainfall. Some places in the Khasi and Jaintia hills of Meghalaya receive the heaviest rainfall in the world. Cherrapunji gets 11,419 mm of annual rainfall, the highest in the country. In contrast, Rajasthan, Kachchh and the high Ladakh plateau of Kashmir extending westward to Gilgit are regions of low precipitation. They have a yearly rainfall of between 100 and 500 mm. Between these rainfall extremes, there are two areas of moderately

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

high and low rainfall ranging from 1,000 to 2,000 mm and 500 to 1,000 mm. The former is a broad belt in the eastern part of the Peninsula extending northward to the north India plains and the latter runs from the Punjab plains across the Vindhya mountains into the western part of the Deccan, extending further south and east to Karnataka and Andhra Pradesh.

While the rainy season in most parts of the country is from June to September, in Tamil Nadu it is during October-December.

Fauna

Possessing a tremendous diversity of climate and physical conditions, India has a great variety of fauna. There are about 500 species of mammals and 2,100 species of birds in the country. There also exist more than 30,000 different species of insects, apart from a great variety of fishes and reptiles.

The mammals include elephant, associated in India from time immemorial with mythology and the splendour of her regal pageantry, the gaur or Indian bison (the wild buffalo) and the great Indian rhinoceros, now confined to Assam and West Bengal. There are also several deer species like the rare Kashmir stag, swamp deer, the beautiful spotted deer, the unique musk deer, the brow-antlered deer (Thamin), now found in Manipur only, the tiny mouse deer, the Nilgai, the Chousingha (the four-horned antelope), the only four-horned creature in the world, and the Indian antelope or black buck.

Among the animals of prey are the Indian lion, the only lion to be found in the world outside Africa. The tiger, which is the national animal, numbers more than 2,500. The general decline in its number in recent years has led to the launching of 'Project Tiger', a scheme financed by the Government of India to safeguard the tiger, its prey and its habitat, in eleven selected areas. Among other cats are the leopard, clouded leopard, the snow-leopard and various species of smaller cats.

Several species of monkeys and langurs are common. The only ape found in India, the hoolock, is confined to the rain forests of the eastern region. The lion-tailed macaque, with a halo hair around the face is found in the south.

Bird life in India is very rich and colourful. The peacock is the national bird. Several other birds like the pheasants, geese, ducks, mynahs, parakeets, pigeons, cranes, hornbills and sunbirds inhabit the forests and wet lands.

The rivers and lakes harbour crocodiles and gharials, the latter being the only representative of a crocodilian order in the world. A project for breeding crocodiles with UNDP assistance, started in 1974, has been instrumental in saving the crocodile from extinction and increasing their population to about 3,000. Twelve schemes are in operation in different states for breeding of crocodiles and releasing them in the wild.

The great Himalayan range has a very interesting fauna and include wild sheep and goats, the markhor, the ibex, the serow and the takin. The lesser panda and the snow-leopard are also to be found in the upper reaches of the mountains.

The Wild Life (Protection) Act, 1972, adopted by most of the states, governs the wild life conservation and protection of endangered species both inside and outside forest areas. Under this Act, trade in rare and endangered species has been banned and further restrictions

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

have been imposed on the export of a number of animals and birds and their products.

India is also a signatary to the Convention on International Trade in Endangered Species of Wild Flora and Fauna. Under this, export or import of endangered species of fauna and flora are subject to strict control and commercial exploitation of such species is prohibited.

There are at present 20 national parks, 197 wild life sanctuaries and 24 zoological gardens in the country. State governments are given financial aid for improvement and development of national parks and sanctuaries.

Flora

India with its wide range of climatic conditions—from the torrid to the arctic—has a rich and varied vegetation, which few other countries of comparable size possess. India can be divided into eight distinct floristic regions, namely, Western Himalayas, Eastern Himalayas, Assam, Indus Plain, Gangetic Plain, Deccan, Malabar and Andamans.

The Western Himalayan region extends from Kashmir to Kumaon. The temperate zone of the region is rich in forests of chirpine, other conifers and broad-leaved temperate trees. Higher up, forests of deodar, blue pine, spruce and silver fir occur. The alpine zone extends from the upper limit of the temperate zone to about 4,750 metres or even higher. The characteristic trees of this zone are the high level silver fir, silver birch and junipers.

The Eastern Himalayan region extends from Sikkim eastwards and embraces Darjeeling, Kurseong and the adjacent tract. The temperate zone of the region has forests of oaks, laurels, maples, rhododendrons, alder and birch; many conifers, junipers and dwarf wilows also occur. The Assam region comprises the Brahmaputra and Surma Valleys and the intervening hill ranges. The vegetation is luxuriant with evergreen forests, occasional thick clumps of bamboos and tall grasses.

The Indus Plain region comprises the plains of Punjab, western Rajasthan and northern Gujarat. This region is dry and hot and supports scanty natural vegetation.

The Gangetic Plain region covers the area from Aravalli ranges to Bengal and Orissa. A greater part of the area is alluvial plain and is under cultivation for wheat, sugarcane and rice. Only small areas support forests of widely differing types.

The Deccan region comprises the entire tableland of the Indian peninsula, and supports vegetation of various kinds from scrub jungles to mixed deciduous forests.

The Malabar region covers the excessively humid belt of mountain country running parallel to the west coast of the Peninsula. This region, besides being rich in forest vegetation, produces important commercial crops, such as, coconut, betelnut, pepper, coffee and tea, Also rubber, cashewnut and eucalyptus have been successfully introduced in some parts of this region.

The Andaman region comprises the Andaman and Nicobar group of islands. It abounds in evergreen, semi-evergreen, mangrove, beach and diluvial forests.

The Himalayas (from Kashmir to Arunachal Pradesh through Nepal, Sikkim and Bhutan), Meghalaya, Nagaland and the Deccan

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

Peninsula are rich in endemic flora, i.e., a large number of plants found in these regions, originated three million years ago, are still restricted to these endemic centres and are not found elsewhere in the world except as introductions.

The interesting and useful flora of the country is being studied in detail by Botanists of the Botanical Survey of India (BSI) and some other institutions. The publication of a new *Flora of India* in the form of fascicles has been initiated by BSI and three fascicles have so far been published.

Because of the destruction of forests for agricultural, industrial and urban development, several Indian plants are facing extinction. Samples of some of these rare plants are being preserved in botanical gardens and national parks. Collections of dried samples of these plants are preserved in the Central National Herbarium, Calcutta, the regional herbaria of the Botanical Survey of India and in other research and teaching institutions of the country.

DEMOGRAPHIC BACKGROUND

Census

The first all-India census, though not synchronously taken, was completed in 1872. Since 1881, census in India has been taken regularly every ten years. The latest in 1971 marked the completion of 100 years of decennial census-taking in the country. The enumeration was conducted between 10 March and 3 April 1971 (with reference date as the sunrise of 1 April) except in certain areas where it was taken between September 1970 and February 1971. The highlights of the 1971 census are given at the end of this chapter.

Total Population

According to the 1971 census, the total population of India was 54,81,59,652. As compared to the 1961 census, it showed an increase of 24.8 per cent. The main cause of this increase in population is the fall in death rate brought about by better health conditions, effective control of epidemics, efficient handling of famine conditions and general improvement and economic development. The population has gone up despite a small fall in the birth rate.

Table 1.1 shows population growth since 1901.

Mid-1978 Population

The population of India as on 1 March 1978 was 63.83 crores. The estimated mid-1977 population of the various states, as on 1 March 1977, was as follows (figures in crores) : Andhra Pradesh 4.84, Assam 1.82, Bihar 6.37, Gujarat 3.06, Haryana 1.15, Himachal Pradesh 0.39, Jammu and Kashmir 0.54, Karnataka 3.32, Kerala 2.43, Madhya Pradesh 4.90, Maharashtra 5.70, Manipur 0.13, Meghalaya 0.12, Nagaland 0.06, Orissa 2.51, Punjab 1.50, Rajasthan 3.05, Sikkim 0.02, Tamil Nadu 4.50, Tripura 0.18, Uttar Pradesh 9.90, West Bengal 5.17, Andaman and Nicobar Islands 0.01, Arunachal Pradesh 0.05, Chandigarh 0.04, Dadra and Nagar Haveli 0.008, Delhi 0.53, Goa, Daman and Diu 0.10, Lakshadweep 0.003, Mizoram 0.04 and Pondicherry 0.05.

Density

The average density of population per sq km in 1971 was 177. It varied considerably from state to state, being as high as 549 in Kerala and as low as 29 in Sikkim and 6 in Arunachal Pradesh. The area, population and density in various states and union territories are shown in table 1.2.

TABLE 1·1

GROWTH OF POPULATION (1901—1971)

State/Union Territory	1901	1911	1921	1931	1941	1951	1961	1971
INDIA	**23,83,96,327**	**25,20,93,390**	**25,13,21,213**	**27,89,77,238**	**31,86,60,580**	**36,10,88,090**	**43,92,34,771**	**54,81,59,652**
States								
Andhra Pradesh	1,90,65,921	2,14,47,412	2,14,20,448	2,42,03,573	2,72,89,340	3,11,15,259	3,59,83,447	4,35,02,708
Assam	32,89,680	38,48,617	46,36,980	55,60,371	66,94,790	80,28,856	1,08,37,329	1,46,25,152
Bihar	2,73,11,865	2,83,14,281	2,81,26,675	3,13,47,108	3,51,70,840	3,87,82,271	4,64,47,457	5,63,53,369
Gujarat	90,94,748	98,03,587	1,01,74,989	1,14,89,828	1,37,01,551	1,62,62,657	2,06,33,350	2,66,97,475
Haryana	46,23,079	41,74,690	42,55,905	45,59,931	52,72,845	56,73,614	75,90,543	1,00,36,808
Himachal Pradesh	19,20,294	18,96,944	19,28,206	20,29,113	22,63,245	23,85,981	28,12,463	34,60,434
Jammu & Kashmir[1]	21,39,362	22,92,535	24,24,359	26,70,208	29,46,728	32,53,852	35,60,976	46,16,632
Karnataka	1,30,54,754	1,35,25,251	1,33,77,599	1,46,32,992	1,62,55,368	1,94,01,956	2,35,86,772	2,92,99,014
Kerala	63,96,262	71,47,673	78,02,127	95,07,050	1,10,31,541	1,35,49,118	1,69,03,715	2,13,47,375
Madhya Pradesh	1,68,60,768	1,94,40,965	1,91,71,750	2,13,55,657	2,39,90,608	2,60,71,637	3,23,72,408	4,16,54,119
Maharashtra	1,93,91,643	2,14,74,523	2,08,49,666	2,39,59,300	2,68,32,758	3,20,02,564	3,95,53,718	5,04,12,235
Manipur	2,84,465	3,46,222	3,84,016	4,45,606	5,12,069	5,77,635	7,80,037	10,72,753
Meghalaya	3,40,524	3,94,005	4,22,403	4,80,837	5,55,820	6,05,674	7,69,380	10,11,699
Nagaland	1,01,550	1,49,038	1,58,801	1,78,844	1,89,641	2,12,975	3,69,200	5,16,449
Orissa	1,03,02,917	1,13,78,875	1,11,58,586	1,24,91,056	1,37,67,988	1,46,45,946	1,75,48,846	2,19,44,615
Punjab	75,44,790	67,31,510	71,52,811	80,12,325	96,00,236	91,60,500	1,11,35,069	1,35,51,060
Rajasthan	1,02,94,090	1,09,83,509	1,02,92,648	1,17,47,974	1,38,63,859	1,59,70,774	2,01,55,602	2,57,65,806
Sikkim	59,014	87,920	81,721	1,09,808	1,21,520	1,37,725	1,62,189	2,09,843
Tamil Nadu	1,92,52,630	2,09,02,616	2,16,28,518	2,34,72,099	2,62,67,507	3,01,19,047	3,36,86,953	4,11,99,168
Tripura	1,73,325	2,29,613	3,04,437	3,82,450	5,13,010	6,39,029	11,42,005	15,56,342
Uttar Pradesh	4,86,27,655	4,81,54,908	4,66,72,398	4,97,79,538	5,65,35,154	6,32,19,655	7,37,54,554	8,83,41,144
West Bengal	1,69,40,088	1,79,98,769	1,74,74,348	1,88,97,036	2,32,29,552	2,62,99,980	3,49,26,279	4,43,12,011
Union Territories[2]								
Andaman and Nicobar Islands	24,649	26,459	27,086	29,463	33,768	30,971	63,548	1,15,133
Arunachal Pradesh	—	—	—	—	—	—	3,36,558	4,67,511
Chandigarh	21,967	18,437	18,133	19,783	22,574	24,261	1,19,881	2,57,251
Dadra and Nagar Haveli	24,280	29,020	31,048	38,260	40,441	41,532	57,963	74,170
Delhi	4,05,819	4,13,851	4,88,452	6,36,246	9,17,939	17,44,072	26,58,612	40,65,698
Goa, Daman and Diu	5,07,518	5,19,222	5,00,904	5,41,710	5,83,736	5,96,059	6,26,667	8,57,771
Lakshadweep	13,882	14,555	13,637	16,040	18,355	21,035	24,108	31,810
Mizoram	82,434	91,204	98,406	1,24,404	1,52,786	1,96,202	2,66,063	3,32,390
Pondicherry	2,46,354	2,57,179	2,44,156	2,58,628	2,85,011	3,17,253	3,69,079	4,71,707

[1]The population of Jammu and Kashmir for 1951 has been taken to be the arithmetic mean of 1941 and 1961 population. The population of the state for 1941 and earlier censuses has been adjusted to exclude that of areas currently under the illegal occupation of Pakistan and China. Later figures exclude the population of such areas.

[2]Population figures for Goa, Daman and Diu, and Dadra and Nagar Heveli for 1901, 1911, 1941 and 1951 have been assumed to be the same as in 1900, 1910, 1940 and 1950 respectively. Similarly, figures for Pondicherry for 1951 have been assumed to be the same as in 1948. The 1961 figures for Goa, Daman and Diu relate to the census taken by the Portuguese authorities with reference date as 15 December 1960; figures for Dadra and Nagar Haveli relate to 1962 census with reference date as 1 March 1962.

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

TABLE 1.2
AREA AND DENSITY OF POPULATION

State/Union Territory	Area (sq km)[1]	Population 1971	Density of population per sq km
INDIA[2]	**32,87,782**	**54,81,59,652**	**177[3]**
States			
Andhra Pradesh	2,76,814	4,35,02,708	157
Assam	78,523	1,46,25,152	186
Bihar	1,73,876	5,63,53,369	324
Gujarat	1,95,984	2,66,97,475	136
Haryana	44,222	1,00,36,808	227
Himachal Pradesh	55,673	34,60,434	62
Jammu and Kashmir[2]	2,22,236	46,16,632	n.a.
Karnataka	1,91,773	2,92,99,014	153
Kerala	38,864	2,13,47,375	549
Madhya Pradesh	4,42,841	4,16,54,119	94
Maharashtra	3,07,762	5,04,12,235	164
Manipur	22,356	10,72,753	48
Meghalaya	22,489	10,11,699	45
Nagaland	16,527	5,16,449	31
Orissa	1,55,782	2,19,44,615	141
Punjab	50,362	1,35,51,060	269
Rajasthan	3,42,214	2,57,65,806	75
Sikkim	7,299	2,09,843	29
Tamil Nadu	1,30,069	4,11,99,168	317
Tripura	10,477	15,56,342	149
Uttar Pradesh	2,94,413	8,83,41,144	300
West Bengal	87,853	4,43,12,011	504
Union Territories			
Andaman and Nicobar Islands	8,293[4]	1,15,133	14
Arunachal Pradesh	83,578	4,67,511	6
Chandigarh	114	2,57,251	2,257
Dadra and Nagar Haveli	491	74,170	151
Delhi	1,485	40,65,698	2,738
Goa, Daman and Diu	3,813	8,57,771	225
Lakshadweep	32	31,810	994
Mizoram	21,087	3,32,390	16
Pondicherry	480	4,71,707	983

[1]Provisional, as on 1 July 1971. n.a.—Not available.
[2]Includes area under illegal occupation of Pakistan and China.
[3]Density worked out after excluding population and area figures of Jammu and Kashmir.
[4]As on 1 January 1966.

The density of population and the percentage increase of population between 1921 and 1971 are as follows :

TABLE 1.3
DENSITY AND INCREASE OF POPULATION

Year	Density per sq km	Decade	Percentage increase in population
1921	81		
1931	90	1921-31	11·0
1941	103	1931-41	14·2
1951	117	1941-51	13·3
1961	142	1951-61	21·5
1971	177	1961-71	24·8

Note:—Density worked out after excluding the population and area figures of Jammu and Kashmir.

Birth and Death Rates and Life Expectancy

Estimates of birth and death rates and life expectancy at decennial censuses since 1921 are given in the table below. There has been a steady increase in life expectancy during the successive decades.

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

TABLE 1.4
BIRTH AND DEATH RATES AND LIFE EXPECTANCY

Decade	Per thousand		Expectation of life at birth	
	Birth rate (estimated)	Death rate (estimated)	Males	Females
1921-30	46·4	36·3	26·91	26·56
1931-40[1]	45·2	31·2	32·09	31·37
1941-50	39·9	27·4	32·45	31·66
1951-60	41·7	22·8	41·89	40·55
1961-70[2]	40·6	17·0	46·40	44·70

[1]Unofficial estimates.
[2]Based on 10 per cent rural and 20 per cent urban sample data.

Table 1.5 shows life expectancy at various stages for the three decades 1941–50, 1951–60 and 1961–70.

TABLE 1.5
EXPECTATION OF LIFE AT VARIOUS STAGES

	Expectation of life					
	1941-50		1951-60[1]		1961-70[2]	
	Males	Females	Males	Females	Males	Females
0	32·5	31·7	41·9	40·6	40·4	44·7
10	40·0	39·5	45·2	43·8	48·8	47·7
20	33·0	32·9	37·0	35·8	41·1	39·9
30	26·6	26·2	29·0	27·9	33·3	32·0
40	20·5	21·1	22·1	22·4	25·9	25·4
50	14·9	16·2	16·5	17·5	19·2	19·7
60	10·1	11·3	11·8	13·0	13·6	13·8

[1]Census of India 1961.
[2]Based on 10 per cent rural and 20 per cent urban sample data.

Age Structure

The following table shows the percentage of different age groups to the total population according to the 1971 census.

TABLE 1.6
AGE STRUCTURE (1971)

Age group	0 to 14	15 to 19	20 to 24	25 to 29	30 to 39	40 to 49	50 to 59	60 +
Percentage of the total population	42·0	8·7	7·9	7·4	12·6	9·3	6·1	6·0

Sex Ratio

According to the 1971 census, there are 28.4 crore males and 26.4 crore females in India. Thus for every thousand males, India has 930 females, the number declining from 972 in 1901 and 950 in 1931. Only Kerala among the states (1,016) and Dadra and Nagar Haveli among the union territories (1,007) have more women than men. The lowest female ratio among the states is in Sikkim (863). Among the union territories, the lowest female ratio is in Andaman and Nicobar Islands where it is 644.

SOCIAL PATTERN

The break-up of the population according to age and marital status is shown in table 1.7.

TABLE 1.7
MARITAL STATUS (1971)[1]

(in hundreds)

Marital status	Males	Females	Total
Never married	15,59,507	12,04,709	27,64,216
Married	11,87,962	11,90,603	23,78,565
Widowed	83,405	2,34,120	3,17,525
Divorced or separated	7,007	10,268	17,275
Unspecified status	2,612	1,404	4,016
Total population	28,40,493	26,41,104	54,81,597

[1]Estimated from ten per cent rural and 20 per cent urban sample data which has been adjusted pro-rata sexwise so as to conform to actual enumerated population.

TABLE 1·8

State-wise Population of Major Religious Communities (1971)

State/Union Territory	Hindus	Muslims	Christians	Sikhs	Buddhists	Jains	Other religions and persuasions	Religion not stated
INDIA	**45,34,36,630**	**6,14,18,269**	**1,42,25,045**	**1,03,78,891**	**38,74,942**	**26,04,837**	**21,84,955**	**36,083**
States								
Andhra Pradesh	3,81,19,279	35,20,166	18,23,436	12,591	10,035	16,108	995	98
Assam	1,06,04,618	35,92,124	3,81,010	11,920	22,565	12,914	1	—
Bihar	4,70,31,801	75,94,173	6,58,717	61,520	4,806	25,185	9,76,997	170
Gujarat	2,38,35,471	22,49,055	1,09,341	18,233	5,469	4,51,578	18,781	9,547
Haryana	89,56,310	4,05,723	9,802	6,31,048	845	31,173	5	1,902
Himachal Pradesh	33,24,627	50,327	3,556	44,914	35,937	626	319	128
Jammu & Kashmir	14,04,292	30,40,129	7,182	1,05,873	57,956	1,150	8	42
Karnataka	2,53,32,388	31,13,298	6,13,026	6,830	14,139	2,18,862	380	91
Kerala	1,26,83,277	41,62,718	44,94,089	1,284	605	3,336	562	1,504
Madhya Pradesh	3,90,24,162	18,15,685	2,86,072	98,973	81,823	3,45,211	836	1,357
Maharashtra	4,13,07,287	42,33,023	7,17,174	1,01,762	32,64,223	7,03,664	80,023	5,079
Manipur	6 32,597	70,969	2,79,243	1,028	495	1,408	83,167	3,846
Meghalaya	1,87,140	26,347	4,75,267	1,262	1,878	268	3,18,168	1,369
Nagaland	59,031	2,966	3,44,798	687	179	627	1,08,159	2
Orissa	2,11,21,056	3,26,507	3,78,888	10,204	8,462	6,521	91,859	1,118
Punjab	50,87,235	1,14,447	1,62,202	81,59,972	1,374	21,383	355	4,092
Rajasthan	2,30,93,895	17,78,275	30,202	3,41,182	3,642	5,13,548	4,339	723
Sikkim	1,44,544	335	1,663	94	62,617	191	399	—
Tamil Nadu	3,66,74,150	21,03,899	23,67,749	4,355	1,148	41,097	6,080	690
Tripura	13,93,689	1,03,962	15,713	318	42,285	375	—	—
Uttar Pradesh	7,39,97,597	1,36,76,533	1,31,810	3,69,672	39,639	1,24,728	423	742
West Bengal	3,46,11,864	90,64,338	2,51,752	35,084	1,21,504	32,203	1,94,126	1,140
Union Territories								
Andaman and Nicobar Islands	70,134	11,655	30,342	865	103	14	1,264	756
Arunachal Pradesh	1,02,832	842	3,684	1,255	61,400	39	2,96,674	785
Chandigarh	1,84,395	3,720	2,504	65,472	92	1,016	47	5
Dadra and Nagar Haveli	71,075	740	1,918	3	73	303	21	37
Delhi	34,07,835	2,63,019	43,720	2,91,123	8,720	50,513	527	241
Goa, Daman and Diu	5,50,482	32,250	2,72,509	885	260	556	269	560
Lakshadweep	1,545	30,019	239	4	—	——	3	—
Mizoram	21,229	1,882	2,86,141	427	22,647	3	61	—
Pondicherry	4,00,793	29,143	41,296	51	21	237	107	59

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

CC-0. Agamnigam Digital Preservation Foundation, Chandigarh

Religions

Table 1.8 shows the population of the major religious communities in various states and union territories.

The following table shows the population of major religous communities along with their percentage to total population and the percentage increase during the decennium 1961—71.

TABLE 1.9
MAJOR RELIGIOUS COMMUNITIES AND THEIR PERCENTAGE

Religious community	1961[1]		1971		Percentage increase 1961-71[3]
	Population	Percentage to total population	Population	Percentage to total population	
Hindus . .	36,65,01,267	83·50	45,34,36,630	82·72	23·69
Muslims . .	4,69,39,791	10·70	6,14,18,269	11·20	30·84
Christians . .	1,07,26,373	2·44	1,42,25,045	2·60	32·58
Sikhs . . .	78,45,170	1·79	1,03,78,891	1·89	32·28
Buddhists . .	32,50,227	0·74	38,74,942	0·71	17·33
Jains . . .	20,27,267	0·46	26,04,837	0·48	28·49
Others[2] .	16,08,118	0·37	22,21,038	0·40	38·11
Total . .	43,92,34,771	100·00	54,81,59,652	100·00	24·80

[1]1961 figures exclude the figures for Arunachal Pradesh as the all-India census schedule was not canvassed throughout that Pradesh then.

[2]Includes figures for 'religion not stated'

[3]Percentage increase (1961-71) of each religion has been calculated on comparative area figures of 1961-71.

Languages

A number of languages and dialects are spoken in India. Of these, 15 languages have been specified in the Eighth Schedule of the Constitution. These are : Assamese, Bengali, Gujarati, Hindi, Kannada, Kashmiri, Malayalam, Marathi, Oriya, Punjabi, Sanskrit, Sindhi, Tamil, Telugu and Urdu.

Rural and Urban Population

Of the 54.82 crore people, who constituted the 1971 population of India, 43,90 crores or about 80 per cent live in villages and 10.92 crores or 20 per cent in cities and towns. There has been, between 1921 and 1971, a steady shift towards urbanisation as shown below :

TABLE 1.10
RURAL AND URBAN POPULATION

Percentage of total population	1921	1931	1941	1951	1961	1971
Rural	88·8	88·0	86·1	82·7	82·0	80·1
Urban	11·2	12·0	13·9	17·3	18·0	19·9

Towns and Villages

According to the 1971 census, there are 5,75,936 villages and 2,643 towns/town agglomerations. Of the villages, 3,18,633 have a population of less than 500 and 6,332 a population of 5,000 and over.

Of the towns and town agglomerations, 148 have a population of over one lakh each (see map). Of these, nine have a population of more than 10 lakhs. These are : Calcutta U.A.[1] (70,31,382), Greater Bombay (59,70,575), Delhi U.A. (36,47,023), Madras (31,69,930),

[1]UA.—Urban Agglomeration.

TABLE 1·11

STATE-WISE DISTRIBUTION OF VILLAGES ACCORDING TO POPULATION (1971)

State/Union Territory	10,000 and over	5,000 to 9,999	2,000 to 4,999	1,000 to 1,999	500 to 999	Less than 500	Total
INDIA	**1,358**	**4,974**	**36,005**	**81,973**	**1,32,990**	**3,18,633**	**5,75,936**[1]
States							
Andhra Pradesh	80	724	4,833	6,411	5,438	9,735	27,221
Assam	1	26	734	3,012	5,950	12,272	21,995
Bihar	86	675	4,337	9,313	15,232	37,923	67,566
Gujarat	17	248	1,968	4,395	5,242	6,405	18,275
Haryana	8	148	975	1,673	1,909	2,018	6,731
Himachal Pradesh	—	2	50	260	861	15,743	16,916
Jammu & Kashmir	—	9	226	764	1,556	3,948	6,503
Karnataka	9	252	2,014	4,556	7,082	12,913	26,826
Kerala	808	316	122	16	2	4	1,268
Madhya Pradesh	6	87	1,292	5,952	16,516	47,030	70,883
Maharashtra	75	492	3,102	7,439	10,529	14,141	35,778
Manipur[2]	—	8	79	172	237	1,450	1,949
Meghalaya	—	—	7	54	237	4,285	4,583
Nagaland	—	1	17	114	169	659	960
Orissa	2	22	830	3,546	8,821	33,771	46,992
Punjab	2	79	940	2,392	3,577	5,198	12,188
Rajasthan	10	165	1,524	4,008	7,817	19,781	33,305
Sikkim	—	—	7	63	114	31	215
Tamil Nadu	140	752	3,902	4,547	3,425	2,969	15,735
Tripura	—	3	65	222	473	3,964	4,727
Uttar Pradesh	58	515	5,400	16,081	28,295	62,212	1,12,561
West Bengal	52	412	3,342	6,622	9,085	18,561	38,074
Union Territories							
Andaman and Nicobar Islands	—	—	1	19	32	338	390
Arunachal Pradesh	—	—	10	38	107	2,818	2,973
Chandigarh	—	1	—	7	10	8	26
Dadra and Nagar Haveli	—	—	5	26	18	23	72
Delhi	2	6	60	79	53	43	243
Goa, Daman and Diu	2	23	77	85	82	140	409
Lakshadweep	—	2	6	1	—	1	10
Mizoram	—	3	54	49	36	87	229
Pondicherry	—	3	26	57	85	162	333

[1] Includes three villages of Manipur for which details are not available.
[2] Separate population of three villages not available.

INDIA 1980C-0. Agamnigam Digital Presevation Foundation, Chandigarh

TABLE 1·12

DISTRIBUTION OF TOWNS/TOWN AGGLOMERATIONS[1] ACCORDING TO POPULATION (1971)

State/Union Territory	1,00,000 and over	50,000 to 99,999	20,000 to 49,999	10,000 to 19,999	5,000 to 9,999	Less than 5,000	Total
INDIA	**148**	**183**	**582**	**875**	**678**	**177[2]**	**2,643[2]**
States							
Andhra Pradesh	13	17	59	76	38	4	207
Assam	1	5	9	24	22	8	69
Bihar	11	9	42	57	35	7	161
Gujarat	8	17	37	66	67	5	200
Haryana	2	9	14	15	20	5	65
Himachal Pradesh	—	1	1	5	7	21	35
Jammu & Kashmir	2	—	3	3	15	20	43
Karnataka	12	9	38	99	46	26	230
Kerala	5	7	40	25	9	2	88
Madhya Pradesh	11	11	41	72	90	7	232
Maharashtra	18	16	61	90	58	14	257
Manipur	1	—	—	—	4	3	8
Meghalaya	1	—	—	1	1	—	3
Nagaland	—	—	1	2	—	—	3
Orissa	5	1	19	21	30	2	78
Punjab	4	8	22	32	30	10	106
Rajasthan	7	7	31	64	38	4	151
Sikkim	—	—	—	2	—	5	7
Tamil Nadu	16	27	57	86	44	11	241
Tripura	1	—	—	4	1	—	6
Uttar Pradesh	22	20	67	91	80	13[2]	293[2]
West Bengal	5	18	34	39	35	3	134
Union Territories							
Andaman and Nicobar Islands	—	—	1	—	—	—	1
Arunachal Pradesh	—	—	—	—	1	3	4
Chandigarh	1	—	—	—	—	—	1
Dadra and Nagar Haveli	—	—	—	—	—	—	—
Delhi	1	—	—	—	—	—	1
Goa, Daman and Diu	—	1	3	1	4	4	13
Lakshadweep	—	—	—	—	—	—	—
Mizoram	—	—	1	—	1	—	2
Pondicherry	1	—	1	—	2	—	4

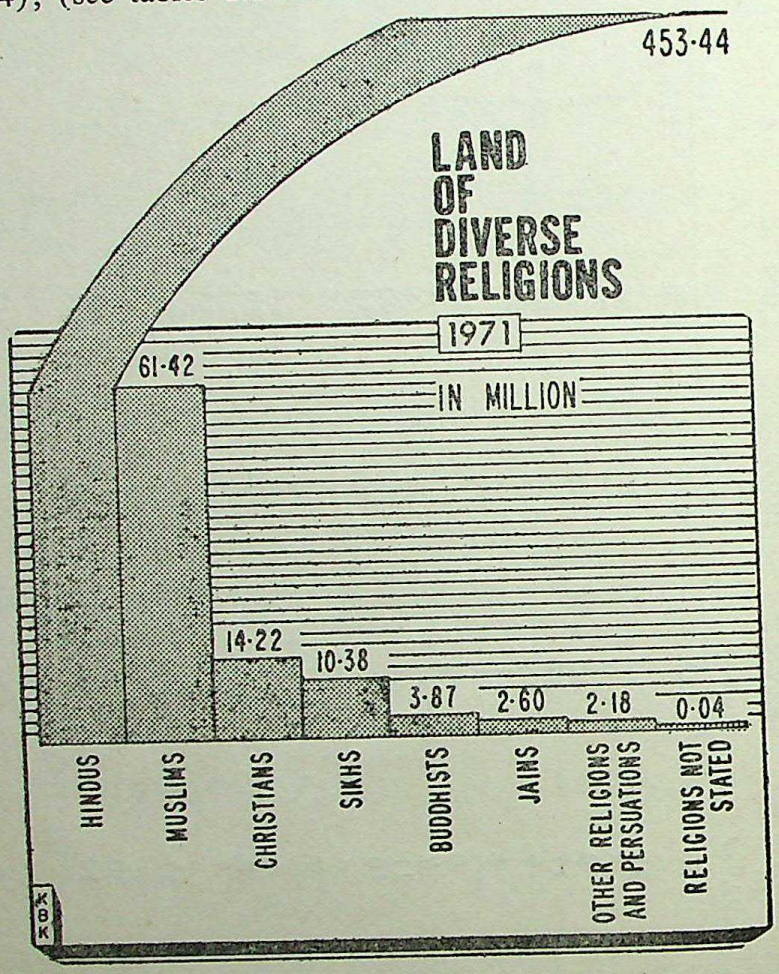
[1]In certain clusters the urban area is not limited only to the notified boundary of any one or two places but embraces satellite towns and cities and industrial towns or settlements close to this urban area, being outgrowths of such towns/cities. Such well-formed clusters are treated urban agglomerations, the determinant being a continuous urban spread including the outgrowth(s).

[2]Includes the town of Badrinathpuri which was snow bound and uninhabitated at the time of census,

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

Hyderabad U.A. (17,96,339), Ahmedabad U.A. (17,41,522), Bangalore U.A. (16,53,779), Kanpur U.A. (12,75,242), Pune U.A. (11,35,034), (see tables 1.11 and 1.12).



1971 CENSUS HIGHLIGHTS

Population of India (crores)	Persons	54·8
	Males	28·4
	Females	26·4
Life expectancy 1961-70	Males	46·4 years
	Females	44·7 years
Birth rate 1961-70 (per thousand)		40·6
Death rate 1961-70 (per thousand)		17·0
Decennial growth rate 1961-71 (per cent)	24·8	
Density of population (per sq km[1])	177	
Sex ratio (females per 1,000 males)	930	
Literacy rate (including age group 0-4) (per cent)	Persons	29.44
	Males	39.44
	Females	18.69
Proportion of urban population to total population (per cent)	19.91	
Percentage of workers to total population (main activity only)	Persons	32.93
	Males	52.51
	Females	11.87

[1]Density worked out after excluding the figures of Jammu and Kashmir as figures for the area beyond the cease-fire line are not available.

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

2 NATIONAL SYMBOLS

NATIONAL FLAG

The National Flag is a horizontal tricolour of deep saffron (Kesari) at the top, white in the middle and dark green at the bottom in equal proportion. The ratio of the width of the Flag to its length is two to three. In the centre of the white band is a wheel, in navy blue, which represents the *Charkha.* Its design is that of the wheel (*Chakra*) which appears on the abacus of the Sarnath Lion Capital of Asoka. Its diameter approximates to the width of the white band and it has 24 spokes.

The design of the National Flag was adopted by the Constituent Assembly of India on 22 July 1947. Its use and display are regulated by a code.

STATE EMBLEM

The State Emblem of India is an adaptation from the Sarnath Lion Capital of Asoka as preserved in the Sarnath museum. In the original there are four lions, standing back to back, mounted on an abacus with a frieze carrying sculptures in high relief of an elephant, a galloping horse, a bull and a lion separated by intervening wheels (*Chakras*) over a bell-shaped lotus. Carved out of a single block of polished standstone the Capital is crowned by the Wheel of the Law (*Dharma Chakra*).

In the State Emblem adopted by the Government of India on 26 January 1950, only three lions are visible, the fourth being hidden from view. The wheel appears in relief in the centre of the abacus with a bull on the right and a horse on the left and the outlines of the other wheels on the extreme right and left. The bell-shaped lotus has been omitted. The words, *Satyameva jayate,* from the *Mundaka Upanishad* meaning 'Truth alone triumphs', are inscribed below the abacus in Devanagari script.

NATIONAL ANTHEM

Rabindranath Tagore's song *Jana-gana-mana* was adopted by the Constituent Assembly as the National Anthem of India on 24 January 1950. It was first sung on 27 December 1911 at the Calcutta session of the Indian National Congress. The complete song consists of five stanzas. The first stanza constitutes the full version of the National Anthem. It reads :

Jana-gana-mana-adhinayaka jaya he
Bharata-bhagya-vidhata.
Punjaba-Sindhu-Gujarata-Maratha-
Dravida-Utkala-Banga
Vindhya-Himachala-Yamuna-Ganga
Uchhala-jaladhi-taranga
Tava subha name jage,
Tava subha asisa mage,
Gahe tava jaya-gatha.
Jana-gana-mangala-dayaka jaya he
Bharata-bhagya-vidhata
Jaya he, jaya he, jaya he,
Jaya jaya jaya, jaya he.

Playing time of the full version of the National Anthem is approximately 52 seconds. A short version consisting of the first and last

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

lines of this stanza (playing time approximately 20 seconds) is also played on certain occasions. The following is Tagore's English rendering of the stanza :

Thou art the ruler of the minds of all people,
Dispenser of India's destiny.
Thy name rouses the hearts of Punjab, Sind, Gujarat and Maratha,
Or Dravida and Orissa and Bengal.
It echoes in the hills of Vindhyas and Himalayas,
mingles in the music of Jamuna and Ganges
and is chanted by the waves of the Indian Sea.
They pray for thy blessings and sing thy praise.
The saving of all people waits in thy hand,
Thou dispenser of India's destiny.
Victory, victory, victory to thee.

NATIONAL SONG

Bankim Chandra Chatterjee's *Vande Mataram,* which was a source of inspiration to the people in their struggle for freedom, has an equal status with *Jana-gana-mana.* The first political occasion on which it was sung was the 1896 session of the Indian National Congress. The following is the text of its first stanza :

Vande Mataram !
Sujalam, suphalam, Malayaja-shitalam,
Shasyashyamalam, Mataram !
Shubhrajyotsna, pulakitayaminim,
Phullakusumita-drumadala-shobhinim,
Suhasinim sumadhura-bhashinim,
Sukhadam varadam, Mataram !

The English translation of the stanza rendered by Sri Aurobindo is :

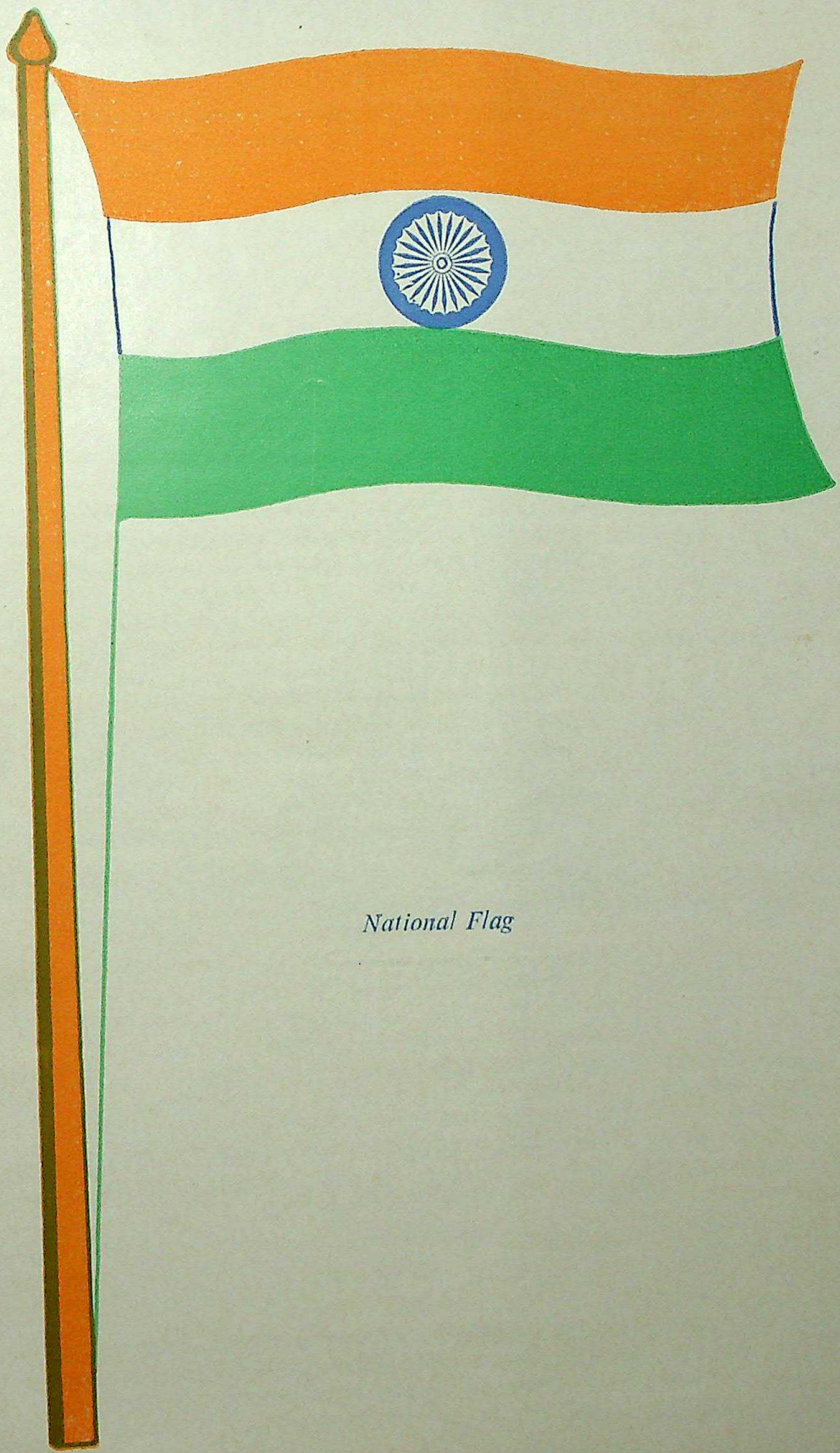
I bow to thee, Mother,
richly-watered, richly-fruited,
cool with the winds of the south,
dark with the crop of the harvests.
the Mother !
Her nights rejoicing in the glory of the moonlight,
her lands clothed beautifully with her trees in flowering bloom,
sweet of laughter, sweet of speech,
the Mother, giver of boons, giver of bliss !

NATIONAL CALENDAR

A uniform National Calendar based on the Saka era with Chaitra as its first month and a normal year of 365 days was adopted from 22 March 1957 along with the Gregorian calendar for the following official purposes : (i) The Gazette of India, (ii) news broadcasts by All India Radio, (iii) calendars issued by the Government of India, and (iv) government communications addressed to members of the public.

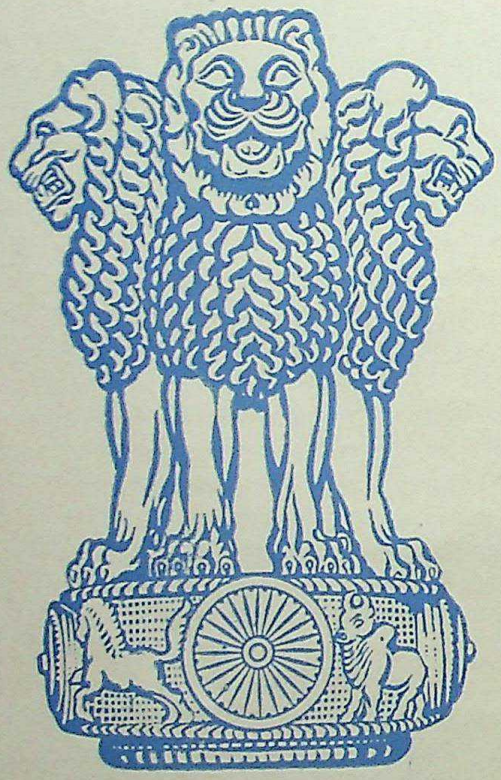
The dates of the National Calendar have a permanent correspondence with the dates of the Gregorian calendar; 1 Chaitra falling on 22 March normally and on 21 March in a leap year.

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh



National Flag

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh



सत्यमेव जयते

National Emblem

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

3 GOVERNMENT

India, a union of states, is a Sovereign Democratic Republic with a parliamentary system of government. The Republic is governed in terms of the Constitution, which was adopted by the Constituent Assembly on 26 November 1949 and came into force on 26 January 1950.

The Constitution is federal in structure with unitary features and the President of India is the constitutional head of the executive of the union. Though the Constitution says that the executive power of the union is vested in the President, it also specifies that he shall exercise this power 'in accordance with the Constitution'. Article 74(1) of the Constitution enjoins that there shall be a 'Council of Ministers with the Prime Minister at the head to aid and advise the President in the exercise of his functions.' The real executive power thus vests in the Council of Ministers headed by the Prime Minister, collectively responsible to the Lok Sabha (House of the People). Similarly, in the states, the Governor occupies the position of the head of the executive of the state, but it is virtually the Council of Ministers with the Chief Minister at the head, collectively responsible to the Legislative Assembly of the state, which carries on the executive government.

Under the Constitution, the areas of jurisdiction of the union and states are demarcated . The constituent and residual powers of legislation are vested in Parliament of the union.

Besides, a system of local self-government is in vogue. The Directive Principles of State Policy embodied in article 40 of the Constitution say that the State shall take steps to organise village Panchayats and endow them with such powers and authority as may be necessary to enable them to function as units of self-government. A Panchayati Raj system has grown in almost every state whereby every village as well as groups of villages have self-governing institutions with varying powers. In the big cities there are elected municipal corporations and in medium and small towns there are elected municipal councils or committees.

The superintendence, direction and control of the preparation of the electoral rolls for, and the conduct of, all elections to Parliament and to the state legislatures and to the offices of President and Vice-President are vested in the Election Commission which consists of the Chief Election Commissioner and such number of other Election Commissioners, if any, as the President may fix and appoint. The Chief Election Commissioner's independence is sought to be protected by a special Constitutional provision to the effect that he shall not be removed from his office except in like manner and on the like grounds as a judge of the Supreme Court, and his conditions of service shall not be varied to his disadvantage after his appointment.

The parliamentary system of government in India is based on adult suffrage, whereby all citizens of India who are not less than 21 years of age and are not disqualified under the Constitution or any law made by the appropriate legislature on certain grounds like non-residence, unsoundness of mind or crime, illegal or corrupt practices have the right to be registered as voters in any election to the Lok Sabha and legislative assemblies of the states. In 1980, the number

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

of voters on the electoral rolls was 35.65 crores approximately.

The Constitution also has provisions for the independence of the Judiciary, of the Comptroller and Auditor-General of India, and the Public Service Commissions.

The Judiciary has now been separated from the executive at all levels throughout the country.

THE UNION AND ITS TERRITORY

India comprises 22 states and nine union territories. The states are : Andhra Pradesh, Assam, Bihar, Gujarat, Haryana, Himachal Pradesh, Jammu and Kashmir, Karnataka, Kerala, Madhya Pradesh, Maharashtra, Manipur, Meghalaya, Nagaland, Orissa, Punjab, Rajasthan, Sikkim, Tamil Nadu, Tripura, Uttar Pradesh and West Bengal. The union territories are : Andaman and Nicobar Islands, Arunachal Pradesh, Chandigarh, Dadra and Nagar Haveli, Delhi, Goa, Daman and Diu, Lakshadweep, Mizoram and Pondicherry.

CITIZENSHIP

The Constitution provides for a single and uniform citizenship for the whole of India. Every person who was at the commencement of the Constitution (26 January 1950) domiciled in India and (a) was born in India, or (b) either of whose parents was born in India, or (c) who had been ordinarily resident in the territory of India for not less than five years immediately preceding that date, became a citizen of India. Special provision was made for migrants from Pakistan and for persons of Indian origin resident abroad. The Citizenship Act 1955, which supplements the provisions of the Constitution, provides for the acquisition of citizenship by birth, descent, registration, naturalisation and incorporation of territory. The Act also provides for loss of citizenship by renunciation, termination and deprivation.

FUNDAMENTAL RIGHTS

The Constitution offers all citizens, individually and collectively, some basic freedoms. These are guaranteed in the Constitution in the form of seven broad categories of Fundamental Rights which are justiciable. These are : (i) the right to equality including, equality before law, prohibition of discrimination on grounds of religion, race, caste, sex, or place of birth and equality of opportunity in matters of employment; (ii) the rights to freedom of speech and expression; assembly; association or union; movement; residence; acquisition, holding and disposal of property; and the right to practise any profession or occupation (some of these rights are subject to the security of the State, friendly relations with foreign countries, public order, decency or morality; (iii) the right against exploitation, prohibiting all forms of forced labour, child labour and traffic in human beings; (iv) the right to freedom of conscience and free profession, practice and propagation of religion, (v) the right of minorities to conserve their culture, language and script and to establish and administer educational institutions of their choice; (vi) the right to property, subject to the right of the State to compulsory acquisition for public purpose and by authority of a law which also fixes the amount to be paid or lays down the principles to determine the amount; and (vii) the right to constitutional remedies for the enforcement of Fundamental Rights.

FUNDAMENTAL DUTIES

By the 42 Amendment of the Constitution, adopted in 1976, fundamental duties of the citizens have also been enumerated. These enjoin upon a citizen, among other things, to abide by the Constitution, to cherish and follow the noble ideals which inspired our national

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

struggle for freedom, to defend the country and to render national service when called upon to do so and to promote harmony and the spirit of common brotherhood amongst all the people of India transcending religious, linguistic and regional or sectional diversities.

DIRECTIVE PRINCIPLES OF STATE POLICY

The Constitution lays down certain Directive Principles of State Policy which, though not justiciable, are 'fundamental in the governance of the country' and it is 'the duty of the State to apply these principles in making laws'. These lay down that the State shall strive 'to promote the welfare of the people by securing and protecting as effectively as it may a social order in which justice—social, economic and political, shall inform all the institutions of national life'. The State shall direct its policy in such manner as to secure the right of all men and women to an adequate means of livelihood, equal pay for equal work, and, within the limits of its economic capacity and development, to make effective provision for securing the right to work, education and public assistance in the event of unemployment, old age, sickness and disablement or other cases of undeserved want. The State shall also endeavour to secure to workers a living wage, humane conditions of work, a decent standard of life and full enjoyment of of workers in the management of industries.

In the economic sphere, the State is to direct its policy in such a manner as to secure the distribution of ownership and control of the material resources of the community to subserve the common good and to ensure that the operation of the economic system does not result in the concentration of wealth and means of production to common detriment. The State is also to take steps to secure the participation of workers in the management of industries.

Some of the other important Directives relate to the provision of opportunities and facilities for children to develop in a healthy manner, free and compulsory education for all children up to the age of fourteen; promotion of educational and economic interests of scheduled castes, scheduled tribes and other weaker sections; organisation of village panchayats; separation of judiciary from the executive, promulgation of a uniform civil code for the whole country; protection of national monuments; promotion of justice on a basis of equal opportunity; provision of free legal aid; protection and improvement of the environment and safeguarding of forests and wild life of the country; and the promotion of international peace and security, just and honourable relations between nations, respect for international law and treaty obligations and settlement of international disputes by arbitration.

THE UNION

EXECUTIVE

The union executive shall consist of the President, the Vice-President and the Council of Ministers with the Prime Minister as the head to aid and advise the President.

President

The President is elected by the members of an electoral college consisting of the elected members of both Houses of Parliament and of the legislative assemblies of states in accordance with the system of proportional representation by means of the single transferable vote. To secure uniformity among the states *inter se* as well as parity between the states as a whole and the union, suitable weightage is given to each vote. The President must be a citizen of India, not less than

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

35 years of age, and qualified for election as a member of the Lok Sabha (House of the People). His term of office is five years and he is eligible for re-election. His removal from office is to be in accordance with the procedure prescribed in Article 61 of the Constitution. He may, by writing under his hand addressed to the Vice-President, resign his office.

The executive power of the union is vested in the President and is exercised by him either directly or through officers subordinate to him in accordance with the Constitution. The supreme command of the Defence Forces of the Union also vests in him. The President summons, prorogues, addresses, sends messages to Parliament and dissolves the Lok Sabha; promulgates ordinances at any time, except when both Houses of Parliament are in session; makes recommendations for introducing financial and money bills and gives assent to bills; grants pardons, reprieves, respites or remissions of punishment or suspends, remits or commutes sentences in certain cases. When there is a failure of constitutional machinery in a state, he can assume to himself all of any of the functions of the government of the state. The President can proclaim emergency in the country if he is satisfied that a grave emergency exists whereby the security of India or of any part of its territory is threatened whether by war or external aggression or armed rebellion.

Vice President

The Vice-President is elected by the members of an electoral college consisting of the members of both Houses of Parliament in accordance with the system of proportional representation by means of the single transferable vote. He must be a citizen of India, not less than 35 years of age, and eligible for election as a member of the Rajya Sabha (Council of States). His term of office is five years and he is eligible for re-election. His removal from office is to be accordance with the procedure prescribed in Article 67(b).

The Vice-President is the *ex-officio* Chairman of the Rajya Sabha and acts as the President when the latter is unable to discharge his functions due to absence, illness or any other cause, or till the election of a new President (to be held within six months) when a vacancy is caused by the death, resignation or removal, or otherwise of the President. While so acting he ceases to perform the functions of the Chairman of the Rajya Sabha.

Council of Ministers

There is a Council of Ministers headed by the Prime Minister to aid and advise the President in the exercise of his functions. The Prime Minister is appointed by the President who also appoints other ministers on the advice of the Prime Minister. The Council is collectively responsible to the Lok Sabha. It is the duty of the Prime Minister to communicate to the President all decisions of the Council of Ministers relating to the administration of the affairs of the union and proposals for legislation and, information relating to them.

The Council of Ministers comprises ministers, who are members of the Cabinet, ministers of State and deputy ministers. For the list, see Appendices.

Administrative Set-up

Rules of Business have been framed under the Constitution for the allocation of the business of government among ministers for convenient transaction.

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

The allocation is made by the President on the advice of the Prime Minister specifying the items of business allotted to each ministry and by assigning a ministry or a part of a ministry or more than one ministry to the charge of a minister. A cabinet minister is often assisted by a minister of state or a deputy minister or both.

Generally, each ministry has an officer designated as Secretary to the Government of India to advise the minister on policy matters and general administration.

Cabinet Secretariat

The Cabinet Secretariat has an important co-ordinating role in the process of decision-making at the highest level and operates under the direction of the Prime Minister. Its functions include submission of cases to the Cabinet and its committees, preparation of the records of decisions taken and follow-up action on their implementation. It also services the committees of Secretaries which meet periodically under the chairmanship of the Cabinet Secretary to consider and advise on problems requiring inter-ministerial consultation and co-ordination. It formulates the Rules of Business and allocates the business of the Government of India to the ministries and departments under the direction of the Prime Minister and with the approval of the President. The Department obtains and circulates to the President, the Vice-President, the Council of Ministers and other important functionaries, periodical summaries and notes on important developments in each ministry.

PUBLIC SERVICES

For recruitment to civil services and posts under the union government, the Constitution provides for an independent body known as the Union Public Service Commission. The chairman and members of the Commission are appointed by the President.

To ensure the independence of the Commission, the Constitution debars its chairman from further employment either under the Government of India or the government of a state. A member of the Commission is, however, eligible for appointment as chairman of that Commission or of a state Public Service Commission, but for no other government employment.

The personnel of the Commission as on 1 January 1980 was :

Chairman :	Dr. M.L. Shahre	
Members :	Asoka Sen	N. S. Saksena
	Teja Singh Virk	S. Sampath
	M. Singaravelu	Dr N. A. Noor Muhammad
	B. Behra	Smt R. D. Dhan

Staff Selection Commission

On the recommendations of the Administrative Reforms Commission, a Subordinate Service Commission came into existence on 1 July 1976. It was renamed as the Staff Selection Commission from 26 September 1977. Its primary function is to make recruitment to non-technical Class III posts in different departments of the Government of India and in subordinate offices except those posts for which recruitment is made by the Railway Service Commission and industrial establishments. The Commission's headquarters as well as the office of its northern region is located in New Delhi. The offices of the central,

5247

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

western, eastern and southern regions are located at Allahabad, Bombay, Calcutta and Madras respectively. It has two sub-regional offices at Raipur and Gauhati.

The personnel of the Commission as on 7 January 1980 was :—

Chairman : S.Hamid

Member : Amar Singh.

To ensure independence of the Commission, the Chairman and member of the Commission are debarred from taking up further employment under the central government or the government of a state or in any organisation under the control of these governments.

COMPTROLLER AND AUDITOR-GENERAL

The Controller and Auditor-General of India is appointed by the President. The procedure and the grounds for his removal from office are the same as for a Supreme Court judge. He is not eligible for further office under the union or a state government after he ceases to hold his office.

The President on the advice of the Comptroller and Auditor-General prescribes the form in which the accounts of the union and of the states are to be kept. His reports on the accounts of the union and of the states are submitted to the President and the respective Governors and are placed before Parliament and state legislatures.

His duties, powers and conditions of service have been specified by the Comptroller and Auditor-General's (Duties, Powers and Conditions of Service) Act, 1971.

OFFICIAL LANGUAGE

Hindi in Devanagari script is the official language of the union and the international form of Indian numerals is used for official purposes. It was, however, provided in the Constitution that English shall continue to be used for all official purposes of the union till 25 January 1965. But later on it was felt that a complete change-over to Hindi was not practicable within the stipulated period. Hence, the Official Languages Act, 1963, as amended, lays down that English may continue to be used, in addition to Hindi, for all official purposes of the union for which it was being used immediately before 26 January 1965 and also for the transaction of business in Parliament. Further, English shall be used for purposes of communication between the union and a state which has not adopted Hindi as its official language. Where Hindi is used for communication between a state which has adopted Hindi as its official language and another state which has not done so, such communication shall be accompanied by a translation in English. Even a state which has not adopted Hindi as its official language may use Hindi for communication with the union or with a state which has adopted Hindi as its official language. The general policy of the government is to encourage progressive use of Hindi as the official language of the union and as a link language between the centre and the states and between the states themselves.

The Department of Official Language had been entrusted with the responsibility of implementing the official language policy of the union government and to co-ordinate the activities of various ministries/ departments in this behalf.

LEGISLATURES

The legislature of the union, which is called Parliament, consists of the President and two Houses, known as the Rajya Sabha and the Lok Sabha. Each House of Parliament has to meet within six months of

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

its previous sitting. A joint sitting of the two Houses can be held in certain cases.

Rajya Sabha

The Constitution provides that the Rajya Sabha shall consist of not more than 250 members, of whom 12 having special knowledge or practical experience in literature, science, art and social service, shall be nominated by the President and the rest shall be representatives of the states and the union territories. The elections to the Rajya Sabha are indirect; those representing the states are elected by the elected members of the legislative assemblies of the states concerned in accordance with the system of proportional representation by means of the single transferable vote and those representing the union territories are chosen in such manner as Parliament may by law prescribe. The Rajya Sabha is not subject to dissolution, one-third of its members retiring on the expiration of every second year.

The membership of the Rajya Sabha, as constituted at present, is 244. Of these, 232 represent the states and union territories and twelve members, being specialists in the fields of literature, science, art and social service, are nominated by the President.

Lok Sabha

The Lok Sabha as constituted at present consists of 544 members. Of these, 525 are directly elected from 22 states and 17 from nine union territories. Two members are nominated by the President to represent the Anglo-Indian community.

The number of seats for each state is so allocated that the ratio between the number and the population of the state is, as far as practicable, the same for all the states. The allocation of seats in the present Lok Sabha is based on the 1971 census and, under the 42nd Amendment of the Constitution (1976), will continue to be so based until figures of the first census taken after 2000 A.D. become available. The term of the Lok Sabha is five years from the date appointed for its first meeting.

The state-wise allocation of seats in the two Houses and the party position in the Lok Sabha is given in Table 3.1. For names of members of Parliament, see Appendices.

Qualifications for Membership of Parliament

In order to be chosen a member of Parliament, a person must be a citizen of India; must be not less than 30 years of age in the case of the Rajya Sabha and not less than 25 years of age in the case of the Lok Sabha. Additional qualifications may be prescribed by Parliament by law.

Parliamentary Privileges

The Constitution provides for freedom of speech in Parliament. No member of Parliament can be held liable to any proceedings in any court in respect of anything said or any vote given by him in Parliament or any of its committees. Other powers, privileges and immunities of the members are the same as those enjoyed by the members of the House of Commons of the British Parliament at the commencement of the Indian Constitution, until Parliament defines them by law. The validity of any proceedings in parliament shall not be called in question on the ground of any irregularity of procedure.

Leaders of Opposition in Parliament

Giving cognizance to the important role of the Leader of Opposition in parliamentary democracy, statutory recognition has been accorded to the Leaders of Opposition in the Rajya Sabha and the Lok Sabha. They also get salary and certain facilities to enable them to discharge

TABLE 3·1

Allocation of Seats in two Houses of Parliament and Party Position in Lok Sabha

(As on 1 March 1980)

	No. of seats in Rajya Sabha	Lok Sabha								
		Seats	Congress (I)	Janata (S)	CPI (M)	Janata	DMK	Other Parties	Unattached	Total
1	2	3	4	5	6	7	8	9	10	11
STATES										
Andhra Pradesh	18	42	41	—	—	—	—	1[2]	—	42
Assam	7	14	2	—	—	—	—	—	—	2 (12 vacant)
Bihar	22	54	29	5	—	8	—	8[3]	3	53 (1 vacant)
Gujarat	11	26	25	—	—	1	—	—	—	26
Haryana	5	10	5	4	—	1	—	—	—	10
Himachal Pradesh	3	4	3	—	—	—	—	—	—	3 (1 vacant)
Jammu and Kashmir	4	6	1	—	—	—	—	4[4]	—	5 (1 vacant)
Karnataka	12	28	27	—	—	1	—	—	—	28
Kerala	9	20	5	—	6	—	—	7[5]	2	20
Madhya Pradesh	16	40	35	—	—	4	—	—	1	40
Maharashtra	19	48	39	—	—	8	—	1[6]	—	48
Manipur	1	2	1	—	—	—	—	1[7]	—	2
Meghalaya	1	2	1	—	—	—	—	—	—	1 (1 vacant)
Nagaland	1	1	1	—	—	—	—	—	—	1
Orissa	10	21	20	1	—	—	—	—	—	21
Punjab	7	13	11	—	—	—	—	—	1	12[1]
Rajasthan	10	25	18	2	—	4	—	1[8]	—	25
Sikkim	1	1	—	—	—	—	—	—	1	1
Tamil Nadu	18	39	20	—	—	—	16	3[9]	—	39
Tripura	1	2	—	—	2	—	—	—	—	2
Uttar Pradesh	34	85	51	30	—	3	—	1[10]	—	85
West Bengal	16	42	4	—	28	—	—	10[11]	—	42

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

UNION TERRITORIES										
Andaman and Nicobar Islands	1	1	1	—	—	—	—	—	—	1
Arunachal Pradesh . .	1	2	2	—	—	—	—	—	—	2
Chandigarh . . .		1	1	—	—	—	—	—	—	1
Dadra and Nagar Haveli .		1	1	—	—	—	—	—	—	1
Delhi	3	7	6	—	—	1	—	—	—	7
Goa, Daman and Diu . .	—	2	1	—	—	—	—	—	1	2
Lakshadweep . . .	—	1	—	—	—	—	—	1[12]	—	1
Mizoram . . .	1	1	—	—	—	—	—	—	1	1
Pondicherry . . .	1	1	1	—	—	—	—	—	—	1
Anglo-Indian (Nominated) .		2	—	—	—	—	—	—	2	2
Nominated by President under Section 80 (i)(a) of the Constitution	12	—	—	—	—	—	—	—	—	—
TOTAL . . .	244	544	352	42	36	31	16	38	12	527 (16 vacant)

[1] Excluding the Speaker
[2] Congress(U)—1
[3] Congress(U)—4; CPI-4
[4] Congress (U)—1; National Conference—3
[5] Congress (U)—3; CPI—2; Muslim League—2
[6] Congress(U)—1
[7] CPI—1
[8] Congress(U)—1
[9] A I A D M K-2; Muslim League—1
[10] CPI—1.
[11] Revolutionary Socialist Party—4; Forward Bloc—3; CPI—3
[12] Congress (U)—1

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

their functions in Parliament. Necessary legislation for this was enacted in July 1977.

Functions and Powers of Parliament

The main functions of Parliament are to make laws for the country and make finances available to the government for the services of the State. The Council of Ministers is collectively responsible to the Lok Sabha. Parliament is also vested with the powers to impeach the President and to remove judges of the Supreme Court and High Courts, the Chief Election Commissioner and the Comptroller and Auditor-General in accordance with the procedure laid down in the Constitution.

All legislation requires the consent of both Houses of Parliament. In the case of money bills, however, the will of the Lok Sabha prevails. Delegated legislation is also subject to review and control by Parliament. All financial legislation must be recommended by the President but the Lok Sabha alone has the power to assent or refuse to assent, to the demands for grants, authorise appropriations of money and approve the proposals for taxation. In times of an emergency, and also in some other contingencies laid down in the Constitution, the legislative authority of Parliament also extends to matters enumerated in the State List. The Power to amend the Constitution also rests primarily with Parliament, except in some cases where ratification by the legislatures of not less than one-half of the states is prescribed by the Constitution.

Parliamentary Committees

To assist Parliament in its deliberations, Parliamentary Committees are appointed or elected by the respective Houses themselves on a motion made or nominated by their presiding officers.

Broadly, these committees are of two kinds, standing committees and *ad hoc* committees. The former are elected or appointed every year or periodically and their work goes on more or less on a continuous basis. The latter are appointed *ad hoc,* that is as and when the need arises. They cease to exist as soon as they complete the work assigned to them.

Standing committees : Among the standing committees, the three financial committees, *viz.,* committee on Public Accounts, Estimates and Public Undertakings—constitute a distinct class and between them keep a vigil over government spending and performance.

The Public Accounts Committee scrutinises the Appropriation Accounts of the Government of India and the report of the Comptroller and Auditor-General thereon. It ensures that public money is spent in accordance with Parliament's decision and calls attention to cases of waste, extravagance, loss or nugatory expenditure. The Estimates Committee reports on 'what economies, improvements in organisation, efficiency or administrative reform, consistent with the policy underlying the estimates' may be effected. It also examines whether 'the money is well laid out within the limits of the policy implied in the estimates and suggests the form in which the estimates shall be presented to Parliament. The Committee on Public Undertakings examines the reports and accounts of certain specified public undertakings and reports of the Auditor-General thereon, if any. It also examines whether the public undertakings are being run efficiently and 'managed in accordance with sound business principles and prudent commercial practices'. The control exercised by these committees is

TABLE 3·2

EXISTING STRENGTH OF LEGISLATIVE ASSEMBLIES AND PARTY POSITION

(As on 1 June 1980)

States/Union Territory	Total Strength	Janata (JP)	BJP	Janata(S) (CS)	INC(I)	INC(U)	C.P.I.	C.P.M.	Other Parties	Indepen-dents	Vacant
1	2	3	4	5	6	7	8	9	10	11	12
1. Andhra Pradesh .	294	7	3	9	251	3	6	8	3	3	1
2. Assam% . .	126	28	—	4	36	16	6	11	13	8	4
3. Bihar . . .	324	13	21	42	167	14	23	6	16	19	3
4. Gujarat . . .	182	21	9	1	140	—	—	—	—	10	1
5. Haryana . .	90	15	—	23	48	—	—	—	—	1	3
6. Himachal Pradesh .	68	1	24	1	34	—	—	1	—	4	3
7. Jammu & Kashmir*	76	11	—	2	7	1	—	—	52	1	2
8. Karnataka . .	224	18	—	—	161	30	3	—	2	7	3
9. Kerala . . .	140	5	—	—	17	22	17	34	44	1	—
10. Madhya Pradesh .	320	2	60	1	246	—	2	—	1	8	—
11. Maharashtra .	288	17	14	—	186	47	2	2	8	12	—
12. Manipur . .	60	4	—	—	37	6	5	1	4	3	—
13. Meghalaya . .	60	1	—	—	—	—	—	—	55	2	2
14. Nagaland . .	60	—	—	—	24	—	—	—	35	—	1
15. Orissa . . .	147	3	—	13	117	2	4	—	—	7	1
16. Punjab . . .	117	—	1	—	63	—	9	5	37	2	—
17. Rajasthan . .	200	8	32	7	133	6	1	1	—	12	—
18. Sikkim . . .	32	—	—	—	—	—	—	—	31	1	—
19. Tamil Nadu . .	234	2	—	—	30	—	10	11	180	1	—
20. Tripura . .	60	—	—	—	—	—	—	50	7	1	2
21. Uttar Pradesh .	425	4	11	59	306	13	7	—	4	17	4
22. West Bengal . .	294	23	—	5	18	3	2	174	60	4	5
23. Arunachal Pradesh .	30	—	—	—	20	—	—	—	8	2	—
24. Delhi . . .	56	—	—	—	Metropolitan Council dissolved on 21-3-1980.						
25. Goa, Daman & Diu@	30	—	—	—	22	—	—	—	7	1	—

GOVERNMENT
CC-0. Agrasen Digital Presevation Foundation, Chandigarh

1	2	3	4	5	6	7	8	9	10	11	12
26. Mizoram . .	30	2	—	—	—	—	—	—	28	—	—
27. Pondicherry . .	30	3	—	—	10	—	—	1	16	—	—
TOTAL . .	3997	188	175	167	2073	163	97	305	611	127	35

@Latest party position not received.

* Excluding 24 seats ear-marked for Pakistan occupied territory.

%Assam Legislative Assembly under suspension w.e.f. 12-12-1979.

Other Parties referred to in Col. (10) *included—*

1. Andhra Pradesh . . . . Majillis Ittehad-ul-Muslimeen 3.
2. Assam . . . . . Plains Tribals Council of Assam 4, Revolutionary Communis Party of Indie 4, Assam Janata Vidhayani Dal 5.
3. Bihar . . . . . Forward Bloc 1, Jharkhand Mukti Morcha 13, Janata (S)—RJ 1, Marxist Co-ordination 1.
4. Jammu & Kashmir . . . . National Conference 48, Jamait-E-Islami 1, Inqualabi National Conference 2, J & K People's Conference 1.
5. Karnataka . . . . . Muslim League 1, Republican Party of India 1.
6. Kerala . . . . . Muslim League 14, Kerala Congress (M) 8, Revolutionary Socialist Party 6, Kerala Congress (J) 6, All India Muslim League 5, National Democratic Party 3, Kerala Congress (P) 1, Praja Socialist Party 1.
7. Madhya Pradesh . . . . Republic Party of India (Khobragade) 1.
8. Maharashtra . . . . . Peasant's & Workers Party 8.
9. Manipur . . . . . Manipur People's Party 4.
10. Meghalaya . . . . . All Party Hill Leaders Conference 20, Public Demands Implementation Convention 2, United Meghalaya Parliamentary Democratic Forum 33.
11. Nagaland . . . . . Naga National Democratic Party 35.
12. Punjab . . . . . Shiromani Akali Dal 37.
13. Sikkim . . . . . Sikkim Janata Parishad 22, Sikkim Congress (R) 8, Sikkim Prajatantra Congress 1.
14. Tamil Nadu . . . . . All India Anna Dravida Munnetra Kazhagam 129, Dravida Munnetra Kazhagam 38, All India Forward Bloc 3, Tamil Nadu Kamaraj Congress 3, Gandhi Kamaraj National Congress 6, Indian Union Muslim League 1.
15. Tripura . . . . . Revolutionary Socialist Party 2, Forward Bloc 1, Tripura Upajati Juba Samiti 4.
16. Uttar Pradesh . . . . . Janata Party (S)—Raj Narain 4.
17. West Bengal . . . . . Forward Bloc 27, Revolutionary Socialist Party 20, Revolutionary Communist Party of India 3, Forward Bloc (Marxist) 3, Biplabi Bangla Congress 1, Socialist Unity Centre 4, Muslim League 1, Communist Party of India (Marxist Leninist) 1.
18. Arunachal Pradesh . . . People's Party of Arunachal Pradesh 8.
19. Goa, Daman & Diu . . . Maharashtrawadi Gomantak Party 7.
20. Mizoram . . . . . People's Conference 19, People's Conference 'B' Group 4, Mizoram Congress Group 5.
21. Pondicherry . . . . . Dravida Munnetra Kazhagam 15, Indian Union Muslim League 1.

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

of a continuous nature. They gather information through questionnaires, memoranda from representative non-official organisations and knowledgeable individuals, on-the-spot study of organisations and oral examination of official and non-official witnesses.

The other standing committees are : (i) committee on privileges—examines any question of privilege referred to it by the House or the Speaker; (ii) committee on petitions—examines petitions on bills and on matters of public interest and also entertains representations on central subjects; (iii) committee on subordinate legislation—scrutinises whether the powers to make rules, regulations, sub-rules and bye-laws conferred by the Constitution or delegated by Parliament are being properly exercised by the government within the scope of such delegation; (iv) committee on government assurances—keeps track of the assurances given by ministers on the floor of the House and pursues them till they are implemented; (v) committee on papers laid on the table—examines all the papers laid on the table of the House by ministers; (vi) business advisory committee—recommends the allocation of time for all items to be brought before the House; (vii) committee on private members' bills and resolutions—deals with classification and allocation of time to Bills from private members, examines Constitution amendment bills before their introduction in the Lok Sabha; (viii) committee on absence of members from the sittings of the House—considers leave applications of members; (ix) general purposes committee—considers and advises the Speaker on matters concerning the affairs of the House; (x) House committee deals with residential accommodation, medical aid and other amenities to the members of Parliament; (xi) library committee—considers matters concerning the libraries; (xii) committee on the welfare of scheduled castes and scheduled tribes—considers matters relating to their welfare and watches whether the constitutional safe-guards given to them are being properly implemented; and (xiii) joint committee on salaries and allowances of members of Parliament—deals with salaries and allowances, frames rules in respect of matters like housing, telephone, postal facilities etc.

Ad hoc Committees : *Ad hoc* committees may be broadly classified into two categories, *viz.*, committees which are constituted from time to time, either by the Lok Sabha or by the Speaker, to enquire into and report on specific subjects. The second category of *ad hoc* committees are the select or joint committees on bills which are appointed to consider and report on particular bills.

Consultative Committee

There are Consultative Committees for different ministries and departments which provide a forum for discussion between members of Parliament and the ministries. These Committees function in accordance with the guidelines evolved by the government in consultation with leaders of opposition parties and groups.

THE STATES

The system of government in the states closely resembles that of the union.

EXECUTIVE

The state executive consists of the Governor and the Council of Ministers with the Chief Minister at its head.

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

Governor

The Governor of a state is appointed by the President for a term of five years and holds office during his pleasure. Only Indian citizens above 35 years of age are eligible for appointment to this office. The executive power of the state is vested in the Governor and all executive actions of the government of the state are expressed to be taken in his name.

The Governor has to act on the aid and advice of the Council of Ministers, except in so far as he is by or under the Constitution required to exercise his functions or any of them in his discretion. The discretionary powers of the Governors, specifically so stated in the Constitution, are those relating to certain matters concerning the administration of the tribal areas in Assam, Meghalaya and the Tuensang area of Nagaland and the maintenance of law and order in Nagaland. In the case of Sikkim, the Governor has special responsibility for peace and for an equitable arrangement for ensuring the social and economic advancement of different sections of the population of the state and in the discharge of his special responsibility, he acts in his discretion subject to certain directions as may be given by the President from time to time. However, all Governors while discharging such constitutional functions as the appointment of the Chief Minister of a state or sending a report to the President about the failure of the constitutional machinery in a state, have to exercise their own judgement.

Council of Ministers

The Chief Minister is appointed by the Governor, who also appoints other ministers on the advice of the Chief Minister. The Council of Ministers is collectively responsible to the legislative assembly of the state.

Planning

At the state level, an inter-departmental committee of secretaries headed by the Chief Secretary or Secretary in-charge of planning, coordinates development programmes. Generally, the functions of coordination for planning and implementation of programmes in the districts are performed by an officer commonly known as Development Commissioner. As a rule, a committee of the state cabinet under the Chief Minister provides overall guidance and direction. At the State level, the apex body is the State Planning Board which mostly consists of the Chief Minister as Chairman and ministers and other eminent non-officials as members.

District Administration

District Administration in the country is under a collector who is responsible for the proper collection of revenue, for the maintenance of law and order and for the developmental activities in the district. The police force in each district is headed by a superintendent of police.

LEGISLATURE

For every state there is a legislature which consists of the Governor and one House or, as the case may be, two Houses. In Andhra Pradesh, Bihar, Jammu and Kashmir, Karnataka, Maharashtra, Tamil Nadu and Uttar Pradesh, there are two Houses known as the Legislative Council and the Legislative Assembly.[1] In the remaining States, there is only one House known as the Legislative Assembly. Parliament can, by law, provide for the abolition of an existing legislative

[1]Although the Constitution (Seventh Amendment) Act, 1956 provides for the creation of a legislative council in Madhya Pradesh, it has not yet been constituted.

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

council or for the creation of one where one does not exist, if the proposal is supported by a resolution of the legislative assembly concerned.

Legislative Council (Vidhan Parishad)

The legislative council of a state comprises not more than one-third of the total number of members in the legislative assembly of the state and in no case less than 40 members.[1] About one-third of the members of the council are elected by members of the legislative assembly from amongst persons who are not its members, one-third by electorates consisting of members of municipalities, district boards and other local authorities in the states, one-twelfth by electorates consisting of persons who have been, for at least 3 years, engaged in such educational institutions within the state and a further one-twelfth by registered graduates of more than three years' standing. The remaining members are nominated by the Governor from among those who have distinguished themselves in the fields of literature, science, art, co-operative movement and social service. The legislative councils are not subject to dissolution but one-third of their members retire every second year.

Legislative Assembly (Vidhan Sabha)

The legislative assembly of a state consists of not more than 500 and not less than 60 members[2] chosen by direct election from territorial constituencies in the state. The demarcation of territorial constituencies is to be done in such a manner that the ratio between the population of each constituency and the number of seats allotted to it, as far as practicable, is the same throughout the state. The term of an assembly is five years unless it is dissolved earlier.

Table 3.2 gives the strength of the legislative councils in the states with bicameral legislatures and the number of seats and party position in the legislative assemblies in the states as on 1 June 1980.

Powers and Functions

The state legislature has exclusive powers over the subjects enumerated in List II of the Seventh Schedule to the Constitution and concurrent powers over those enumerated in List III. The financial powers of the legislature include authorisation of all expenditure, taxation and borrowing by the state government. The legislative assembly alone has the power to originate money bills. The legislative council can make only recommendations in respect of changes it considers necessary within a period of fourteen days of the receipt of a money bill from the assembly. The assembly can accept or reject the recommendations.

Reservation of Bills

The Governor of a state may reserve any Bill for the consideration of the President. Bills relating to subjects like compulsory acquisition of property, measures affecting the powers and the position of High Courts, and imposition of taxes on the storage, distribution and sale of water or electricity in inter-state river or river valley development projects should necessarily be so reserved. No Bill seeking to impose restrictions on inter-state trade can be introduced in a state legislature without the previous sanction of the President.

---

[1]The legislative council of Jammu and Kashmir has 36 members vide section 50 of the Constitution of Jammu and Kashmir.

[2]The legislative assembly of Sikkim has 32 members vide article 371 F of the Constitution.

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

Control over Executive

The state legislatures, apart from exercising the usual power of financial control, use all the normal parliamentary devices like questions, discussions, debates, adjournment and no-confidence motions and resolutions to keep a watch over the day-to-day work of the Executive. They also have their Committees on Estimates and Public Accounts to ensure that grants sanctioned by the legislature are properly utilised.

UNION TERRITORIES

The Union territories are administered by the President acting, to such extent as he thinks fit, through an administrator appointed by him.

The administrators of Arunachal Pradesh,[1] Delhi, Goa, Daman and Diu, Mizoram and Pondicherry are designated as Lt. Governors, while the administrators of Andaman and Nicobar Islands, and Chandigarh are designated as Chief Commissioners. The Lt.-Governor of Goa, Daman and Diu is concurrently the administrator of Dadra and Nagar Haveli. Lakshadweep has a separate administrator.

The union territories of Arunachal Pradesh, Goa, Daman and Diu, Mizoram and Pondicherry have legislative assemblies and Councils of Ministers. Delhi has a metropolitan council and an executive council.

The legislative assemblies in the union territories may make laws with respect to matters in the state field, namely, those enumerated in List II or List III in the Seventh Schedule in so far as they are applicable in relation to union territories. Parliament can also make laws with respect to such matters for the union territories.

The Metropolitan Council in Delhi has the right to discuss and make recommendations about matters insofar as they relate to Delhi.

ZONAL COUNCILS

The states and union territories on the mainland except those in the north-eastern region are grouped into zones. Each zone has a high-level advisory body known as the Zonal Council which provides the forum for discussing matters of common interest to the states and union territories in that zone. The states of Haryana, Himachal Pradesh, Jammu and Kashmir, Punjab, Rajasthan and the union territories of Chandigarh and Delhi are in North Zone. The Central Zone comprises the states of Madhya Pradesh and Uttar Pradesh while the states of Bihar, Orissa, Sikkim and West Bengal are in the Eastern Zone. The states of Gujarat and Maharashtra and the union territories of Goa, Daman and Diu, and Dadra and Nagar Haveli are in the Western Zone. The Southern Zone comprises the states of Andhra Pradesh, Karnataka, Kerala and Tamil Nadu and the union territory of Pondicherry.

For the north eastern region there is a body similar to the zonal councils to deal with matters of common interest in the States of Assam, Manipur, Meghalaya, Nagaland and Tripura and the Union Territories of Arunachal Pradesh and Mizoram. The North Eastern Council, which came into being in August, 1972 has certain additional functions. It formulates a unified and co-ordinated regional plan (which supplements the state plan) covering matters of common importance. In case of projects or schemes intended to benefit two or more states, the Council recommends the manner in which they are

[1] Under the Government of Union Territories (Amendment) Act, 1975, the union territory of Arunachal Pradesh has come under a Lt. Governor from 15 August 1975. The Pradesh Council and counsellors were replaced by a legislative assembly and a Counsel of Ministers respectively.

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

executed, managed or maintained, their benefits shared and the expenditure incurred. The Council also reviews, from time to time the implementation of the projects and schemes included in the regional plan and recommends measures for effecting co-ordination among the concerned states and union territories in the matter of implementation of such projects and schemes. The council normal, meets twice a year.

LOCAL GOVERNMENT

Municipal Corporations

In most of the states, corporations have been established for major cities under specific Acts of the state legislature. These are headed by elected mayors. The administration of the city vests in an elected council and the powers of the corporation are exercised by three authorities : (i) general council of the corporation; (ii) standing committees; and (iii) the municipal commissioner/chief executive officer. The standing committees are elected by the council and carry out most of the work of administration including taxation, finance and preparation of budget, engineering works and health and education services. The power of sanctioning estimates and contracts vests in the three authorities up to specified amounts. The general council appoints most of the officers of the corporation but the municipal commissioner is appointed by the state government. The executive powers of the corporation generally vest in the municipal commissioner who prescribes the duties of the various officers, and supervises their work. The functions of the municipal corporation include public safety, health, education and other conveniences of the citizens as well as construction and maintenance of water works and sewerage, streets and bridges, parks and recreation grounds, markets and shopping centres and so on. Major corporations also undertake works of housing and land development. But there is growing practice of entrusting these works to special urban development authorities. There were 40 municipal corporations in the country in December 1979.

Municipal Committees and Councils

For all other towns and cities there are municipalities having elected boards or councils which in turn elect their own presidents. In Maharashtra a system of direct election of presidents was introduced in 1974. All the members of a municipality constitute the general body which decides all questions of policy and important details of municipal administration. The powers of passing the budget imposing taxes, voting expenditure and making rules and regulations vest in the general body. The municipal council, however, mostly functions through committees which exercise delegated powers or make recommendations to the council. The day-to-day work of the municipality is carried on by an executive officer drawn sometimes from state civil service or a state-wide cadre of municipal officers. In many states, however, the municipal councils continue to appoint their own executive officers and other officials.

Local Self-Government in Districts

The system of Panchayati Raj, which was introduced in 1959, is a three-tier structure of local self-government at the village, block and district levels. The states are, however, free to make changes in the structure to suit local conditions. All Panchayati Raj bodies are organically linked up. Special representation on these bodies is given to backward classes, women and co-operative societies.

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

Village Panchayats

Elected directly by and from among the villagers, the Panchayats are responsible for agricultural production, rural industries, medical relief, maternity and child welfare, management of common grazing grounds, maintenance of village roads, streets, tanks and wells and provision of sanitation and drainage. In some places Panchayats also look after primary education, maintenance of village records and the collection of land revenue. For building up funds they levy tax on houses and lands, fairs and festivals and sale of goods, impose octroi duties, and build up remunerative community assets.

For providing a speedy and inexpensive system of justice to the villagers, Nyaya (judicial) Panchayats or village courts are functioning in some of the states.

Cantonment Boards

Cantonment boards have been set up in cantonment areas under the Contonments Act 1924, to provide civic amenities and welfare services to the people living there. These boards are autonomous local self-government bodies subject to supervision and control by GOC-in-C of the Command and the central government. The number of elected and nominated members is kept equal in these boards varying from 1 to 7 although according to statutory provisions the number of nominated members may exceed the elected members by one. These boards have the power of taxation which is their main source of revenue. The budget estimates prepared by the boards are scrutinised and sanctioned by the GOC-in-C of the Command. There were 62 cantonment boards on 1 January 1980.

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

4 DEFENCE

India's defence policy aims at promoting and sustaining durable peace in the sub-continent by means of negotiations and co-operation among various countries in the region and at the same time equipping the defence forces as a safeguard against aggression.

The supreme command of the Armed Forces is vested in the President of India. The responsibility for national defence, however, rests with the Cabinet. All important questions having a bearing on defence are decided by the Cabinet Committee on Political Affairs, which is presided over by the Prime Minister. The Defence Minister is responsible to Parliament for all matters concerning the Defence Services. The administrative and operational control of the Armed Forces is exercised by the Ministry of Defence and the three Services Headquarters. The Ministry of Defence acts as the central agency for ensuring a co-ordinated development of the three Services, for conveying the Government of India's decisions on policy matters to the three Services Headquarters for implementation and for obtaining financial sanction for defence expenditure from Parliament.

ORGANISATION

The three Services function under their respective Chiefs of Staff. As on 1 January 1980 the Chiefs of Staff were :

Chief of the Army Staff	General O. P. Malhotra
Chief of the Naval Staff	Admiral R. L. Pereira
Chief of the Air Staff	Air Chief Marshal I. H. Latif

Army

At the Army Headquarters, in New Delhi, the Chief of the Army Staff is assisted by the Vice Chief of the Army Staff and five other Principal Staff Officers—Deputy Chief of Army Staff, Adjutant-General, Quartermaster-General, Master-General of Ordnance and Military Secretary—and a Head of Branch, namely, Engineer-in-Chief.

The Army is organised into five Commands—Western, Eastern, Northern, Southern and Central—each under a General Officer Commanding-in-Chief of the rank of Lieutenant-General. The Commands are divided into Areas, Independent Sub-Areas and Sub-Areas. An Area is commanded by a General Officer Commanding of the rank of a Major-General and an Independent Sub-Area and Sub-Area by a Brigadier.

The Army consists of a number of arms and services. These are : President's Body Guard, Armoured Corps, Regiment of Artillery, Corps of Engineers, Corps of Signals, Infantry, Army Service Corps, Military Nursing Service, Army Medical Corps, Army Dental Corps, Army Ordnance Corps, Corps of Electrical and Mechanical Engineers, Remount and Veterinary Corps, Military Farm Services, Army Education Corps, Intelligence Corps, Corps of Military Police, Army Physical Training Corps, Pioneer Corps, Army Postal Service Corps and Defence Security Corps.

The sanctioned strength of all ranks of the Army is over 8.00 lakhs.

Council

The operational control of the Navy is exercised by the Naval Headquarters in New Delhi through a chain of commands.

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

At the Headquarters, the Chief of the Naval Staff is assisted by four Principal Staff Officers namely, the Vice Chief of the Naval Staff, Chief of Personnel, Chief of Material and Deputy Chief of the Naval Staff.

The Navy is organised into three Naval Commands under Flag Officers Commanding-in-Chief : Western Naval Command with headquarters at Bombay, Eastern Naval Command with headquarters at Vishakhapatnam and Southern Naval Command with headquarters at Cochin.

The Navy has two Fleets—the Western Fleet and the Eastern Fleet. The two Fleets consist of the aircraft-carrier *INS Vikrant,* two cruisers, a number of frigate squadrons, including some of the latest types of anti-submarine and anti-aircraft frigates, a squadron of anti-submarine patrol vessels, one mine-sweeping squadron, submarines, a submarine depot ship and fast vessels carrying surface-to-surface guided missiles. The Navy has a sizeable air wing with various types of fixed wing aircraft and helicopters. Besides, there are some survey ships, two fleet tankers and a number of auxiliary craft. The survey units of the Navy carry out a survey of India's coast and approaches to the harbours. A naval organisation is functioning at Port Blair to ensure the security of the Bay Islands. An interim coast guard organisation was set up in February 1977. The Navy has taken over the responsibilities for maritime reconnaissance (MR) from the IAF and has also acquired some MR aircraft.

A dockyard—one of the largest in Asia—at Vishakhapatnam on the east coast is nearing completion. The first phase of modernisation and expansion programme of the Naval Dockyard, Bombay has been completed and the second phase is under way.

Since 1964, India has been building her own naval ships and craft. Four Leander class frigates, *INS Nilgiri, Himgiri, Udaygiri* and *Dunagiri,* a survey ship, minesweepers, seaward defence boats, besides harbour utility and ocean-going tugs have already been commissioned. Two more Leander class frigates, seaward defence boats, survey ships, landing craft and a number of auxiliary vessels are under construction.

Air Force

The Indian Air Force is organised into five Commands and an Independent Operational Group. These are : Western Air Command, Central Air Command, Eastern Air Command, Training Command, Maintenance Command and No. 1 (Opl.) Group.

At the Air Headquarters in New Delhi, the Chief of the Air Staff is assisted by four Principal Staff Officers, namely, Vice Chief of the Air Staff, Deputy Chief of the Air Staff, Air Officer-in-Charge, Administration and Air Officer-in-Charge, Maintenance. Each of them controls a group of Directorates.

The Air Force combat fleet, which is made up of 45 squadrons, consists of a variety of fighters, fighter bombers, fighter interceptors, bombers and transport and logistics support aircraft. Among the fighter aircraft are SU-7s, Hunters, Gnats, Ajeets, MIG-21s and HF-24s. Canberras comprise the bomber fleet. A new aircraft, Jagaur, will be inducted into IAF shortly. This will replace Hunters and Canberras. The transport fleet consists of AN-12s, Dakotas, Fairchild Packets, Caribous, Otters, TU-124s and Indian built HS-748s. Helicopters in use are MI-4s. MI-8s, Cheetas and Chetaks, the last two being built in India. The aircraft used for training purposes are HT-2

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

Basic Trainer, HJT-16 (Kiran) Jet Trainer and HS-748 transport trainer, all built in India, and Polish Iskras.

Commissioned Ranks

The following are the commissioned ranks in the three Services; each rank is shown opposite to its equivalent in the other Services.

Army	Navy	Air force
General	Admiral	Air Chief Marshal
Lieutenant-General	Vice-Admiral	Air Marshal
Major-General	Rear-Admiral	Air Vice Marshal
Brigadier	Commodore	Air Commodore
Colonel	Captain	Group Captain
Lieutenant-Colonel	Commander	Wing Commander
Major	Lieutenant-Commander	Squadron Leader
Captain	Lieutenant	Flight Lieutenant
Lieutenant	Sub-Lieutenant	Flying Officer
Second Lieutenant	Acting Sub-Lieutenant	Pilot Officer

EXPENDITURE

Table 4.1 shows the trend in total defence expenditure since 1964-65, its percentage to the total expenditure of the union government and its percentage to the gross national product.

TABLE 4·1
DEFENCE EXPENDITURE

Year	Total defence expenditure (Rs. crores)	Total expenditure of Govt. of India (Rs crores)	Gross national Product (Rs crores)	Defence expenditure as percentage of total govt. expenditure	Defence expenditure as percentage of gross national product
1964-65	806	2,603	21,113	31·0	3·8
1965-66	885	2,720	21,846	32·5	4·0
1966-67	909	3,217	25,250	28·3	3·6
1967-68	968	3,148	29,612	30·7	3·3
1968-69	1,033	3,140	30,293	32·9	3·4
1969-70	1,101	3,590	33,521	30·7	3·3
1970-71	1,199	4,120	36,582	29·1	3·3
1971-72	1,525	5,498	39,147	29·1	3·9
1972-73	1,652	498	43,093	30·0	3·8
1973-74	1,681	5,845	53,596	28·8	3·1
1974-75	2,112	74,423	62,913	28·5	3·4
1975-76	2,472	9,429	65,692	26·2	3·8
1976-77	2,563	10,291	71,047	24·89	3·6
1977-78	2,634	11,605	78,012	22·7	3·4
1978-79 (RE)	2,845	13,694	na	20·8	na
1979-80 (BE)	3,050	13,919	na	21·9	na

RE—Revised estimates. BE—Budget estimates.

n.a.—Not available. *Source*—Ministry of Finance

TRAINING INSTITUTIONS

National Defence Academy

The National Defence Academy (NDA), Khadakvasla, conducts a three-year combined basic military training course for potential officers of the three Services after which they receive specialist training at their respective Service establishments. The cadets are also trained to the degree level of an Indian university. Admissions to the Academy are made on the basis of a qualifying bi-annual written examination conducted by the Union Public Service Commission at different centres in the country, followed by assessment by a Services Selection Board.

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

Boys who have passed the Higher Secondary or an equivalent examination and are between 16 and 18½ years of age on the first day of the month in which the course starts are eligible for admission. They must be unmarried and should remain so during the period of their stay at the Academy.

All expenses of the cadets while at the Academy, except the pocket expense of Rs 40 per month, are met by the government. Where the monthly income of parents is less than Rs 450, even this expnese is borne by the government.

Defence Services Staff College

The Staff College at Wellington provides training to officers of Army, Navy and Air Force for holding staff appointments in their own Services as well as in inter-Service headquarters. About 300 officers from the three Services, including 26 foreign officers and 4 civilian officers, are trained every year.

National Defence College

The National Defence College in New Delhi trains senior officers of the three Defence Services, including a few from foreign countries and senior civilian officers, in politico-military studies connected with national security at the strategic level.

Armed Forces Medical College

The Armed Forces Medical College, Pune, conducts an MBBS course and a degree course in Nursing. It also conducts advanced courses in various disciplines of medical science, each of 96 weeks' duration, for Armed Forces medical officers to enable them to specialise in their respective fields and also to make them eligible to appear for post-graduate degree and diploma examinations of Pune University. Likewise, long courses are being conducted in various disciplines of Dental Surgery leading to MDS degree of Bombay University.

The College also trains para-medical personnel for various technical categories in Armed Forces medical services. In addition, the College runs refresher courses for medical officers of the Armed Forces.

Army College and School

The Indian Military Academy (IMA), Dehra Dun, is the premier institution for training officers for the Army. Its intake includes cadets passing out of the National Defence Academy at Khadakvasla who receives one year's training here before being commissioned. The IMA holds 1½ years' courses for higher age-group entrants who have either qualified in the Union Public Service Commission's examination or are graduate cadets of the National Cadet Corps and have thereafter qualified at the Services Selection Board. Graduates selected for specialised commissions in various technical arms are given one year's training at IMA. A year's training is also imparted at IMA to serving Regular or Territorial Army Junior and Non-Commissioned Officers (JCOs and NCOs) who have successfully completed the three-year training course at the Army Cadet College; on completion of the training at IMA, these personnel are granted officer commissions in the Army. These other ranks are selected earlier for their officer-like qualities and general academic and educational standard.

The College of Combat, Mhow, conducts the Higher Command granted Short Service Commissions in the Army.

The College of Combat, Mhow, conducts the Higher Commander Course, the Senior Command Course and the Junior Command Course. The College of Military Engineering, Kirkee, imparts training to

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

officers and other ranks in all aspects of military engineering. Longer courses of over two years' duration are also conducted to train officers up to the degree standard. The Military College of Telecommunication Engineering at Mhow imparts basic and advanced technical training in telecommunications and signal tactics.

The Armoured Corps Centre and School, Ahmadnagar, conducts training in the tactical handling of armoured fighting vehicles and their driving and maintenance. The School of Artillery, Deolali, provides training in field branch and air defence artillery. The Infantry Schools at Mhow and Belgaum conduct courses for infantry officers and men. The Army Ordnance Corps School at Jabalpur imparts specialised corps training in the identification and preservation of all items, including ammunition and explosives, stocked by the ordnance depots.

The Institute of Defence Management at Secunderabad trains Service and civilian officers in modern defence management techniques.

Some of the other Army training centres and schools are : the High Altitude Warfare School; Counter Insurgency and Jungle Warfare School; the Army Service Corps School, Bareilly; EME School, Vadodara; Military College of Electronics and Mechanical Engineering, Secunderabad; Remount Veterinary Corps Centre and School, Meerut; Army Educational Corps Training College and Centre, Pachmarhi; Intelligence Training School and Depot, Pune; Corps of Military Police Centre and School, Bangalore; Army School of Physical Training, Pune; Army Air Transport Support School, Agra; and the Army Clerks Training School, Aurangabad.

Naval Training Establishments

INS Venduruthy and the Naval Air Station, *Garuda,* both at Cochin, are the principal training centres for the officers and men of the Navy. While *INS Venduruthy* imparts training in gunnery, navigation, torpedo and anti-submarine warfare and communications, *Garuda* has training aircraft of the Navy and some training schools.

Mechanical engineers and artificers are trained at *INS Shivaji* in Lonavla (Maharashtra). Junior engineers and electrical officers of the Service receive training at the engineering college at Lonavla.

INS Valsura, Jamnagar (Gujarat) trains officers and men of the electrical branch of the Service. With most of the ships now fitted with complicated electronic equipment, training has been geared to the present requirements of the Navy.

New recruits joining the Navy are trained at *INS Chilka* near Bhubaneshwar and on completion of their courses become sailors. Sea training is imparted by the two Fleets. Officers and men doing supply and secretariat duties are trained at *INS Hamla,* Malad, Bombay.

To meet the increasing training requirements, a naval academy has been established at Cochin. A Sailors' Training Establishment has been set up at Dabolim in Goa. The First Training Squadron has been raised to give sea training to officers and seamen.

Air Force Training Institution

The basic flying training for pupil pilots is imparted at the Elementary Flying School at Bidar, and the advanced flying training at Air Force Academy, Hyderabad or Fighter Training Wing, Hakimpet (for alternate courses). Pupil pilots who do not come through NDA, such as ex-airmen and NCC cadre, undergo pre-course training at Air Force Administrative College, Coimbatore, before starting basic

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

flying training. Wings and Commissions are given on completion of the advanced stage. Thereafter, these trainee officers are bifurcated into three streams for the final applied stage of flying training—the fighter stream at Air Force Academy, Hyderabad, or the Fighter Training Wing, Hakimpet (for alternate courses), the transport stream at the Transport Training Wing, Yellahanka, and the helicopter stream at the Helicopter Training School, Hakimpet. *Ab-initio* navigation training, advanced navigation training and air signallers' training is given at the Navigation and singnals School, Hyderabad. Ground Duties (non-technical) officers and TAC officers are trained at the Air Force Academy, Hyderabad. Senior Non-Commissioned Officers selected for commission in their respective Ground Duties Branch, undergo a short pre-commissioning course at the Air Force Administrative College. Flying instructors are trained at the Flying Instructors' School, Tambaram. A College of Air Warfare at Secunderabad, with two departments (Department of Air Warfare and Department of Joint Warfare), conducts higher joint services and air warfare studies.

The Air Force Administrative College, Coimbatore runs advanced courses for Ground Duties (non-technical) officers and the Junior Commanders' course for all branches. Technical officers are trained at the Air Force Technical College, Jalahalli. Senior technical officers with more than 13 years of service are trained in management techniques at the Air Force Station, Jalahalli. A school at Sambra near Belgaum trains airmen in accounting, equipment, general office duties, drill and catering. Another school at Sambra trains officers and airmen in physical fitness and sports.

Schools at Jalahalli train airmen in radar, radio, electrical instruments, photo, meteorology, air field safety, driving and police duties. Another school at Tambaram trains airmen in mechanical trades such as air frames, engines, armament and safety equipment. Motor mechanics are trained at another ground training school at Avadi. Ground training schools at Baroda and Barrackpore prepare personnel to man surface to air missiles and associated equipment. Paratroopers for air-borne units of the Army are trained at the Paratroopers Training Schools.

Medical and aircrew officers receive specialised training at the Institute of Aviation Medicine, Bangalore.

Rashtriya Indian Military College

Run on the lines of public schools, the Rashtriya Indian Military College, Dehra Dun, prepares boys who desire subsequently to choose a military career for entrance examination, to the National Defence Academy.

Sainik Schools

Like the Rashtriya Indian Military College, 18 sainik schools prepare boys in the age group 10–18 for the entrance examination of the National Defence Academy. The total strength of boys at present is about 9,000.

SUPPLIES PRODUCTION AND RESEARCH

A substantial part of the defence stores needed by the Services is now being developed and produced in the country. The responsibility for this has been entrusted to two separate Departments—Defence Production and Defence Supplies—in the Ministry of Defence. The Department of Defence Production organises, directs and co-ordinates production of material and equipment required by the Armed Forces. It carries out its responsibility through the Directorate of Technical

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

Development and Production, Ordnance Factories, Inspection, Standardisation, Defence Research and Development Organisation and nine public sector undertakings.

The Department of Defence Supplies handles the problems of indigenisation of defence stores by making use of the facilities available both in the private and public sectors. The Department also helps in establishing the production of newly developed items. In the task of indigenisation, it operates through a number of technical committees.

The Defence Production Board formulates policies in the field of production and plans future growth on balanced and economic lines. The policy on foreign collaboration agreements for defence production is governed by the official statement of 25 April 1973. Under this, the practice of periodic extension of such agreements is to be ended. Instead, outright purchase is to be made of the required know-how which would be improved by research and development within the country.

Ordnance Factories

Under the Department of Defence Production there is a chain of ordnance factories located all over the country. These turn out a variety of equipment and stores, such as battle tanks, highly sophisticated guns, including anti-aircraft guns and field guns, rifles, ammunition, bombs, rockets, a variety of vehicles, bridges, explosives and propellants, instruments, clothing, parachutes and leather items.

Over the years, the value of production in the ordnance factories has risen from Rs 15 crores in 1947 to about Rs 375 crores in 1976-77. Self-sufficiency has been achieved in the production of arms and ammunition, both for the small and medium calibre fighting requirements, most of which are products of our own indigenous efforts, with 10 per cent imported raw materials. Production of heavy guns and their ammunition has also commenced.

Capital projects have been taken in hand involving an outlay of about Rs 330 crores in the field of heavy guns, ammunition, explosives and metallurgical stores. In the new areas of production, are production of heavy guns for the Army, creation of production facilities for propellants for the heavy guns, ammunition, modernisation of facilities at High Explosive Factory, Kirkee, the Cordite Factory, Aruvankadu, and Ordnance Factory, Bhandara. Laser techniques are being adopted for range finding and other uses.

Ordnance factories are also helping parties in India and abroad in setting up production and training. They are at present setting up a defence production training institute in a friendly country. A public sector enterprise, Coal India Limited, has engaged the ordnance factories to set up a facility at Bhandara for manufacture of 5,000 tonnes of commercial explosives a year for use in gassy coal mines.

Defence Undertakings in Public Sector

There are nine public undertakings in the defence sector, employing about 95,000 persons (as on 31 March 1979). The production in 1978-79 was worth Rs 427.00 crores as compared to Rs 417.55 crores in 1977-78. During 1978-79, the public undertakings earned foreign exchange of the value of about Rs 36.75 crores.

A brief description of the nine undertakings is given below :

The Hindustan Aeronautics Ltd. (HAL), set up in 1964, has 11 factories in six different states. Six factories, including the unit at

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

Barrackpore in West Bengal, comprise the Bangalore Complex of HAL. Two factories, at Koraput and Nasik, comprise the MIG complex. The factories at Lucknow and Hyderabad form the accessories complex and the one at Kanpur manufactures the military freighter version of HS-748 aircraft and the low-wing agricultural aircraft, Basant, which was designed and developed for aerial application of pesticides and fertilizers. Besides HS-748 (MF) and Basant, HAL is currently manufacturing the improved version of the Gnat jet fighter, Ajeet, the jet trainer Kiran, the trainer HPT-32, the supersonic jet intercepter, MIG-21M, the Alouette III helicopter, Chetak and the light-weight helicopter for AOP role, Cheetah. The Company has indigenised 2,500 items so far.

The Bharat Electronics (BEL), Bangalore, has three units. Its Bangalore unit, which began production in 1956 with just two electronic items, has diversified its products which range from the tiny transmitters to highly sophisticated radars. Among the electronic components manufactured by it are radio and television receiving valves, germanium and silicon transistors and diodes, X-ray tubes and TV picture tubes. The unit at Ghaziabad, set up in 1973, manufactures electronic equipment to meet the needs of an air defence ground environment system. BEL's third unit is being set up at Pune for manufacture of components for night vision electronic equipment. The company's exports amounted to Rs 21.05 crores during 1978-79.

The Mazagon Docks at Bombay, the Goa Shipyard at Goa and the Garden Reach Shipbuilders and Engineers at Calcutta are building and repairing ships, dredgers, barges and tugs. The Mazagon Docks has completed the fifth Leander class frigate for the Navy and embarked upon the construction of a bigger and more sophisticated class of Indian designed frigates. Under its expansion scheme, it has added two shipbuilding berths, an impounded wet dock capable of taking four medium sized ships at a time, besides new production and assembly shops with modern machinery. It can now handle up to 60 ships a month for voyage repairs. The Garden Reach Shipbuilders and Engineers build ocean-going cargo ships up to 26,000 DWT, large capacity dredgers, and other harbour craft like tugs and barges, besides seaward defence boats and survey vessels for the Navy. They are also building Patrol boats for the Indian Customs. The Goa Shipyard, Ltd., is now capable of building barges up to 1,000 DWT, small dredges, fishing trawlers, tugs and other harbour craft. The Mazagon Docks earned foreign exchange of the value of Rs 10.89 crores during 1978-79.

The Bharat Dynamics, Ltd., Hyderabad incorporated in 1970 for the manufacture of anti-tank missiles in India commenced production with foreign collaboration in 1971. Since then, the undertaking has achieved 72 per cent indigenisation; besides, it has also been attempting to diversify its activities.

The Bharat Earthmovers, Ltd., Bangalore has a unit which manufactures broad gauge railway coaches, trailers, etc., and a second unit at Kolar Gold-fields which manufactures heavy earthmoving equipment.

The Praga Tools at Hyderabad, manufactures drilling tools, cutter grinders, surface grinders, milling machines, machine tool accessories and railway screw coupling, auto-diesel spares, forgings and castings.

The Mishra Dhatu Nigam, Ltd., Hyderabad, was incorporated in 1973 to set up indigenous capabilities for the manufacture of a wide

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

range of sophisticated and strategic special metals and super alloys, in various shapes and sizes, as required by several vital industrial sectors, such as nuclear energy, power generation, aeronautics, space, electronics, chemical engineering and instrument industries. The factory is expected to go into production in 1980.

Research and Development

The Defence Research and Development Organisation was established in 1958. Its principal responsibilities relate to the design and development of new and sophisticated weapons and equipment, based on the operational requirements projected by the Services, to provide help in their indigenous production and to render scientific advice to the three Services as needed. (For details, see chapter "Scientific Research".

TERRITORIAL ARMY

The Territorial Army, which was started in 1949, is designed to give the citizens an opportunity to receive military training in their spare time and to serve the country in times of emergency by providing units to the regular army. It is a voluntary force and has units of infantry, engineers and medical. It is not required to perform military service outside India save under a general or special order of the central government.

All able-bodied nationals of India between the ages of 18 and 35 (with relaxation in the upper age limit for entry into certain technical units) and possessing the requisite qualifications are eligible to join the Territorial Army as an officer or Other Rank.

NATIONAL CADET CORPS

The National Cadet Corps is a youth organisation, entry to which is open to students of universities, colleges and schools on a voluntary basis. It aims at development of leadership, character, comradeship, spirit of sportsmanship and the ideal of service among the youth and creation of a force of disciplined and trained man-power which in a national emergency could be of assistance to the country. The cadets and the NCC commissioned officers have no liability for active military service. Adventure training and social service receive emphasis in the training being imparted to cadets.

NCC consists of three divisions—Senior, Junior and Girls. The present authorised strength of the corps in Senior Division is four lakhs — Army 3,13,800, Navy 12,600, Air 11,600 and Girls 62,000. The Junior Division has an authorised strength of seven lakhs — Army 5,31,900, Navy 49,100, Air 52,000 and Girls 67,000.

WELFARE OF EX-SERVICE-MEN

The Director-General of Resettlement in the Ministry of Defence looks after the resettlement of ex-Servicemen in government and private services, vocational and technical trades, land colonies and transport services. A certain percentage of vacancies has been reserved by both the central and state governments for the ex-Servicemen. To encourage self-employment, several schemes are being implemented in stages. These include establishment of ex-Servicemen's co-operative industrial estates in selected areas, setting up of industrial and shopping centres by using surplus military land, reservation of factory plots and formation of special industrial projects. There are also other schemes in operation which train ex-Servicemen who prefer employment in professions needing background expertise and knowledge. These include training in industrial and agricultural skills, animal husbandry, teaching and social work.

An important organisation which assists ex-Servicemen and their

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

families, in close liaison with the local administration, is the Soldiers', Sailors' and Airmen's Board. The Board, with its headquarters in New Delhi, co-ordinates the activities of the corresponding State Boards. A number of central funds like the Flag Day Fund, the Armed Forces Benevolent Fund and the Armed Forces Reconstruction Fund are also used for the rehabilitation of ex-Servicemen.

To meet the socio-economic requirements of individuals on retirement and to provide financial assistance to the bereaved families, the government has introduced a Group Insurance Scheme with normal premium. The scheme is compulsory and covers death in war.

REHABILITATION OF WAR VICTIMS

Following the Indo-Pak war in December 1971, both the central and state governments formulated a number of schemes to extend benefits and facilities to the war-bereaved families, particularly the widows, the disabled and their dependents. A special organisation in the Ministry of Defence has been created to co-ordinate action on the various schemes. Among the important central schemes is one which allows liberal pension concessions for the widows and families of officers and men killed in action and for those disabled. The scheme, which came into operation from 1 February 1972, is more liberal than any scheme elsewhere in the world and covers all those affected in the military operations since the Pakistani aggression in Jammu and Kashmir in 1947. This apart, the central government is to meet the full cost of education up to the first degree of the dependents of all the personnel of the defence and para-military forces killed or permanently disabled. It would also bear the full cost of such dependents as have already taken up post-graduate courses.

Other schemes, which are in addition to existing concessions, relate to priority in obtaining employment under the central government and public undertakings. Disabled servicemen are entitled to concessions in age, educational qualifications and medical standards. Up to two family members of each serviceman killed in action would be given Class III and Class IV jobs under the Ministry of Defence without registration at the Employment Exchanges. Seats have also been reserved for them in technical institutions.

State schemes include cash grants, *ex-gratia* allotment of land for agricultural purposes and residential plots on concessional rates.

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

5 EDUCATION

By a constitutional amendment in 1976, the technical, medical and university level education has become the joint responsibility of the centre and state governments. The union government, however, continues to be directly responsible in certain areas such as co-ordination and determination of standards in research, scientific, technical and higher educational institutions. The central Ministry of Education is directly responsible for administration and maintenance of the central universities of Aligarh, Banaras, Delhi, Hyderabad, Jawaharlal Nehru, North Eastern Hill and Visva Bharati. The institutions for scientific or technical education financed by the Government of India and declared by Parliament to be institutions of national importance are also the direct responsibility of the ministry. In addition, the ministry shares the responsibility for educational planning jointly with state governments. A special responsibility of the union government is the promotion of education of the weaker sections.

For the discharge of these specific responsibilities, the ministry has set up statutory organisations like the University Grants Commission, Indian Institutes of Technology and other autonomous organisations at the national level like the National Council of Educational Research and Training, which are fully financed by the Government of India. The five Indian Institutes of Technology administered by the union government form the apex institutions for engineering education and research. The other organisations in this field include the 15 regional engineering colleges, four institutes of management and four technical teachers training institutes. The ministry is also running about 300 Kendriya Vidyalayas (central schools) in different parts of the country.

POLICY

The Conference of State Education Ministers held in July 1978 identified the following areas for further development :

(i) universalisation of elementary education; (ii) educational structure and its content; (iii) adult education; (iv) art and culture and (v) physical education and sports.

The Education Ministry, on its own, constituted several working groups in collaboration with the Planning Commission to look into the development and problems connected with the universalisation of elementary education, vocationalisation, technical education, adult education, art and culture and educational technology. Based on the recommendations of the working groups, a framework of action for implementation of the universalisation of elementary education has been adopted on a time-bound basis. A nation-wide programme of adult education has also been launched.

The country is steadily moving towards the realisation of the constitutional directives of providing free and compulsory education to all children up to the age of 14 years. At the primary stage (class I-V), which corresponds to the age-group 6-11, more than 7.00 crore children are attending schools. This represents 85.00 per cent of the total population in that age group as compared to 33.00 per cent three decades ago.

Primary education is now free in all the states and compulsory in most of the states. There were about 10.00 crore students in schools (of all stages) in 1979, as compared to the figure of 2.35 crore in

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

1950-51. At the university stage, the number of students increased by nine times during the same period. The number of institutions imparting education at the different stages at present is : primary, 4.74 lakhs; middle, 1.10 lakh; secondary, 36,190; higher secondary, 7,652; and university (arts, science and commerce colleges), 3,261.

PATTERN

The Education Commission had suggested a uniform (10+2+3) pattern of 15 years' duration leading to the first degree (10 years of high school education, two years of higher secondary education and three years for the first degree course). In the National Policy, 1968, this pattern was adopted.

The new structure has been adopted in Andhra Pradesh, Assam, Bihar, Gujarat, Jammu and Kashmir, Karnataka, Kerala, Maharashtra, Manipur, Meghalaya, Nagaland, Orissa, Sikkim, Tamil Nadu, Tripura, Uttar Pradesh, West Bengal, Arunachal Pradesh, Andaman and Nicobar Islands, Chandigarh, Dadra and Nagar Haveli, Delhi, Goa, Daman and Diu, Lakshadweep and Mizoram. The States of Himachal Pradesh and Rajasthan have agreed in principle to adopt the new structure. The pattern is yet to be adopted in Haryana, Madhya Pradesh and Punjab.

As per decisions reached in the conference of Education Ministers in 1978, the contents of the school education in this pattern had been reviewed. A review of the higher education was also made with special reference to vocationalisation.

PLANS AND EDUCATION

In the three decades of planned development since 1951, the number of educational institutions has more than doubled. The number of teachers and students has gone up by about four times. The achievements during the last three decades and targets of the Sixth Plan are given in table 5.1. Expenditure on education also went up from Rs 153.00 crore in the First Plan to Rs 901.00 crores in four years of the Fifth Plan. The proposed outlay for the Sixth Plan 1978—83 is Rs 1,986 crore. Table 5.2 gives the details of expenditure and outlays during various Plan periods.

Broadly speaking, the Fifth Plan laid emphasis on (i) ensuring equality of educational opportunities as part of the overall plan of ensuring social justice; (ii) establishing closer links between the pattern of education, on the one hand and the needs of development and the employment market, on the other; (iii) improvement of the quality of education imparted; and (iv) involvement of the academic community, including students, in the tasks of social and economic development.

The Draft Sixth Five Year Plan for 1978—83 lays emphasis on : (i) programmes of adult education including eradication of adult illiteracy; (ii) universalisation of elementary education; (iii) vocationalisation at the secondary stage and improvement of quality in secondary stage and higher education; (iv) better and more effective utilisation on non-plan government expenditure for meeting developmental goals; (v) improvement of the quality and implementation of educational programmes in states where universalisation of elementary education has made lesser headway and the prevalence of illiteracy among adults remains large; and (vi) ensuring a rural bias in the educational programmes, to develop science education and a scientific attitude and to provide a system of non-formal education and training at all stages.

TABLE 5·1

ACHIEVEMENTS AND TARGETS AT DIFFERENT LEVELS OF EDUCATION

(1)	1950-51 (2)	1955-56 (3)	1960-61 (4)	1965-66 (5)	1978-79[1] (6)	Sixth Plan targets 1982-83 (7)
Number of pupils in classes I to V (lakhs)	191·5	251·7	349·9	504·7	723·9	912·0
Percentage thereof to total population in age group 6—11	42·6	52·8	62·4	76·7	84·5	103·0
Number of pupils in classes VI to VIII (lakhs)	31·2	42·9	67·0	105·3	180·1	288·0
Percentage thereof to total population in age group 11—14	12·7	16·5	22·5	30·8	38·1	57·0
Number of pupils in classes IX to XI/XII (lakhs)	12·2	18·8	28·9	50·4	90·8	—
Percentage thereof to total population in age group 14—17	5·3	7·4	10·6	16·2	20·6	—
Number of pupils at the university stage arts, science and commerce (lakhs)	3·6	6·3	8·9	14·9	30·3	—
Percentage thereof to total population in age group 17—23	0·8	1·4	1·8	2·7	4·1	—
Percentage of students reading science at university stage	37·8	33·0	26·9	29·5	—	—
Number of primary/junior basic schools	2,09,671	2,78,135	3,30,399	3,91,064	4,74,992	—
Number of middle/senior basic schools	13,596	21,730	49,663	75,798	1,10,902	—
Number of high/higher secondary schools	7,288	10,838	17,257	27,477	46,473	—
Number of multipurpose schools	—	255	2,115	2,386	—	—
Number of training schools	782	930	1,138	601	857	—
Number of training colleges	53	107	478	1,272	496	—
Number of arts, science (including research institutions) and commerce colleges	542	772	1,122	1,788	3,271	—
Number of universities	27	32	45	64	106	—
Number of teachers in primary schools	5,37,918	6,91,249	7,41,515	9,44,377	12,94, 793	—
Percentage of trained teachers in primary schools	58·8	61·2	64·1	70·5	85·3	—
Number of teachers in middle schools	85,496	1,48,394	3,45,228	5,27,754	8,12,075	—
Percentage of traind teachers in middle schools	53·3	58·5	66·5	76·9	88·0	—
Number of teachers in high/higher secondary schools	1,26,504	1,89,794	2,96,305	4,79,060	7,49,096	—
Number of teachers in universities, arts and science colleges	18,648	27,883	41,759	66,882	—	—

[1]Provisional

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

TABLE 5·2

EXPENDITURE OF EDUCATION IN FIVE PLANS AND OUTLAY FOR FIFTH AND SIXTH PLANS

(Rs crores)

Major Heads	Expenditure during Four Five Year Plans and Annual Plans	Fifth Plan			Sixth Plan 1978-83		
		Outlay	Percentage	Anticipated Exp[1]	Percentage	Outlay	Percentage
1	2	3	4	5	6	7	8
Elementary education	694·7	410	31·9	300	32	900	45
Secondary education	366·6	250	19·5	163	18	268	14
University education	421·0	292	22·7	210	24	265	13
Social education	56·22	18	1·4	9	1	200	10
Cultural programmes	25·73	37	2·9	25	3	65	3
Other educational programmes	177·6	122	9·5	92	10	118	6
Total General education.	1,741·8	1,129	87·9	799	88	1,816	91
Technical education	380·7	156	12·1	102	12	170	9
Grand Total	2,122·5	1,285	100·0	901	100	1,986	100

[1]Pertains to four years 1974-78

[2]Expenditure on social education for three Annual Plans included under other educational Programmes

[3]Expenditure for First Plan included under general education

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

TABLE 5·3
ENROLMENT TARGETS AND ACHIEVEMENTS IN FOURTH AND SIXTH PLANS

(lakhs)

Age groups		1969-70	1973-74	Sixth Plan target 1978-83[2]	1978-79[1]
6—11 Classes I—V	Boys	347·70 (95)	396·83 (100)	502 (111)	439·6 (100·2)
	Girls	207·16 (50)	240·36 (65)	410 (96)	288·0 (67·8)
	TOTAL	554·86 (73)	637·19 (84)	912 (103)	721·6 (84·5)
11—14 Classes VI—VIII	Boys	92·75 (47)	105·14 (47)	180 (64)	121·4 (49·2)
	Girls	37·04 (20)	45·31 (21)	108 (44)	59·8 (26·0)
..	TOTAL	129·79 (34)	150·45 (35)	288 (57)	181·8 (38·1)
14—17 Classes IX—XII	Boys.	47·24 (27)	54·06 (28)	101 (31)	58·6 25·6
	Girls	16·06 (10)	20·69 (11)	43·0 10·4	24·6) (11·5)
	TOTAL	63·30 (18)	74·75 (20)	144 (23)	83·2 (18·8)
17—23 University stage	TOTAL	22·37	31·71		42·1

[1]Provisional; [2]*Source*—Draft Sixth Plan 1978-83 (revised)

NOTE : Enrolment ratio has been worked out on the basis of old population Projections, figures in brackets indicate enrolment as percentage of the population of the relevant age-groups.

ELEMENTARY EDUCATION

Provision of universal, free and compulsory education for all children up to the age of 14 is a Constitutional responsibility according to Article 45. Education in classes I—V is free in government schools and schools run by local bodies in all parts of the country. It is also free in classes VI—VIII in all states except for boys in Orissa, Uttar Pradesh and West Bengal. All states except Bihar, Manipur, Meghalaya, Nagaland, Sikkim and Tripura have enacted legislation for compulsory education. As for union territories, such legislation is available in Delhi, Andaman and Nicobar Islands and Chandigarh.

TABLE 5·4
THE PROGRESS ACHIEVED TILL 1979-80

	Enrolment (lakhs)	Percentage
Classes I to V		
Boys	452	103·0
Girls	300	72·0
Total	752	88·0
Classes VI—VIII		
Boys	126	51·4
Girls	66	28·6
Total	192	43·2
Classes I to VIII		
Boys	578	84·4
Girls	366	56·7
Total	944	71·0

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

Till 1978-79, the beginning of the Sixth Five Year Plan, the strategy had been to universalise primary education (classes I to IV/V) in the age-group 6-11 before making serious attempts to universalise middle school education (Classes V/VI—VII/VIII) in the age-group 11—14. The Sixth Plan (1978–83) has, for the first time, emphasized the universalisation of elementary education (class I to VIII in the age-group 6–14) within a time frame of not more than 10 years. An important component of the strategy for universalisation is to cover about 50 per cent of the total non-enrolled and drop-out children by non-formal part-time education. Special central assistance to the tune of Rs 25 crore is to be given to the educationally backward states which have three-fourths of the non-enrolled children comprising 4.18 crores.

SECONDARY EDUCATION

Education is free up to the secondary stage in Andhra Pradesh, Gujarat, Karnataka, Kerala, Tamil Nadu, Andaman and Nicobar Islands, Arunachal Pradesh and Lakshadweep and in government institutions in Jammu and Kashmir, Nagaland, Dadra and Nagar Haveli and Pondicherry. It is free for girls in Madhya Pradesh, Manipur, Orissa, Rajasthan, Tripura, and Uttar Pradesh. Children belonging to the scheduled castes and tribes get free education in all the states.

UNIVERSITY AND HIGHER EDUCATION

Higher education is imparted mainly through universities established either under Acts of Parliament or those of State Legislatures and through a large number of arts, science, commerce and professional colleges affiliated to them. Besides, there are research institutes in several specialised fields and other institutions which are deemed to be universities under the University Grants Commission Act, 1956. There are, at present, 108 universities, and 11 institutions deemed to be universities. Besides, 9 institutions have been declared by Parliament to be institutes of national importance.

University Grants Commission

The University Grants Commission, set up initially in 1953, promotes and coordinates university education and determines and maintains standards of teaching, examination and research in the universities. It has the authority to enquire into the financial needs of the universities and to make appropriate grants to different universities. It advises on the establishment of new universities and other matters pertaining to higher education as may be referred to it.

VOCATIONAL AND TECHNICAL EDUCATION

Training is imparted in 32 engineering and 21 non-engineering trades approved by the National Council for Training in vocational trades to young people within the age group of 15 to 25 years. For the purpose 356 Industrial Training Institutes with an overall capacity of 1.58 lakh have been established in various parts of the country. These are affiliated to the National Council for Training and Vocational Trades. Besides, 65 more government and 244 private Industrial Training Institutes have been given provisional affiliation. Period of training ranges from one to two years. These Institutes are also used as basic training, centres for the apprenticeship training programmes. (The 131 trades designed under the Apprentices Act 1961, follow national classification of occupations and cover 217 industries.) At present, 1.27 lakh apprentices spread over 17,270 industrial establishments are undergoing apprentice training.

There are seven central training institutes for training of instructors under the Directorate General of Employment and Training.

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

Further, to meet the requirement of advanced/specialised craftsmen in industry the following institutions have been established :—
(i) Advanced Training Institute, Madras; (ii) Foreman Training Institute, Bangalore; (iii) Central Staff Training and Research Institute, Calcutta; and (iv) Advanced Training Institute in Electronics, Hyderabad.

Trained manpower at middle-level is needed for a wide range of professional duties, for application of knowledge in field operation, in production and construction, testing and development etc. For this purpose, diploma courses are offered in 320 polytechnics with an annual enrolment capacity of about 50,000 students. They offer a variety of specialisation in engineering and technical as well as in a few non-technological fields. The courses are normally of 3 years duration where full-time institutional instruction is offered and 3½ to 4 years when instruction is on a "sandwich" or on part-time basis.

About two dozen women polytechnics with courses of special interest to, and employment potential for women, have also been established particularly to cater to the needs of the socially/economically inhibited classes.

For the professional engineers and technologists, 150 engineering colleges offer courses leading to bachelor's degree in engineering and technology. The total admission capacity annually for these courses is about 25,000.

The number of institutions offering post-graduate courses is 76 with annual intake capacity of about 5,500. Facilities also exist at the centres, offering part-time courses at the post-graduate level for those who are already in-service. Duration of such courses normally is three years.

Institutions numbering about 30, mostly in the university sector are offering management courses both at the first degree and advanced levels. The courses offered at the various institutions cover training at the Master's degree level for the management and business administration degree with an annual admission capacity of about 1,200.

The vocational training/craftsmen courses are offered at the industrial training institutes. The diploma courses are offered in the polytechnics which are widely spread over all the states and union territories and are affiliated to the respective State Boards of Technical Education who lay down in general the levels and standards of the courses and guide the system of evaluation of the students appearing at the examination.

Five national institutions at Bombay, Kanpur, Kharagpur, Madras and New Delhi, known as Indian Institutes of Technology provide facilities for higher level education and research in engineering and technology. These institutions admit about 1,200 students annually to under-graduate courses. Besides, these institutions along with the Indian Institute of Science, Bangalore admit nearly 2,000 students every year to the post-graduate and 1,500 research scholars. In addition, 70 other engineering colleges and university departments offer facilities for post-graduate courses and research with an annual intake of about 3,500 students. There are also 15 regional engineering colleges and a number of other technological institutions and polytechnics providing facilities for education in various branches of engineering and technology. For specialised courses such as mining

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

and metallurgy, industrial engineering, forge and foundry and architecture, a number of centres have been established. To integrate engineering education with practical training, a number of engineering colleges and polytechnics are now offering 'sandwich' courses in collaboration with industry. The duration of such courses for degree in engineering is 5½ years and for diploma 3½ years. To train teachers needed for polytechnics, there are four technical teachers training institutions.

In 1978, the number of institutions conducting degree and diploma courses in engineering and technology were 156 and 320 respectively as compared to 53 and 89 in 1951. The admissions to these institutions were about 25,000 for degree and 50,000 for diploma courses.

India is now in a position to meet the technical manpower requirements during the next two Five Year Plans with the level of facilities already created.

ADULT EDUCATION

The process of all-round national development in India has changed the concept of adult education significantly. It is no longer confined to traditional literacy in 3 R's alone. The changing socio-economic scene in the country demands overall development of the human resources. While determined efforts are being made to universalise elementary education up to the age of 14 years, educational facilities are being extended to adult population to remedy their educational deprivation and to enable them to develop their potentiality. Thus, the government has resolved to wage a clearly conceived, well-planned and relentless struggle against illiteracy to enable the masses to play an active role in social and cultural change. Literacy is now being recognised as an integral part of an individual's personality. The National Adult Education Programme formally launched on 2 October 1978 aims at providing adult education facilities to cover about 10 crore illiterate persons in the age group 15–35 within the period from 1978-79 to 1983-84. The major objective of the programme is to develop the country's human resources in this vital age-group and enable the vast majority of illiterate persons to participate effectively in the process of national development. The programme, besides providing basic literacy skills, also aims at upgrading the functional skills and creating social awareness among the illiterate masses.

To advise the government in the formulation of policies, a National Board of Adult Education and State Boards of Adult Education have been set up at national as well as state-levels. District level committees have also been set up in most of the states to ensure proper coordination and for overseeing the implementation of the programme at the local level.

Assistance to voluntary organisations working in the field of adult/non-formal education is one of the most successful programmes of the government which continued during 1979-80. During 1979-80, over 600 voluntary agencies had been approved for financial assistance.

Under the scheme of Farmers Educational Literacy Project, 245 projects were taken up. The benefits of adult education through these central pace setters projects reached about 15 lakh adults during 1978-79 and about 25 lakh adults during 1979-80.

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

It has been realised that in addition to organising a massive programme for adult illiterates, it is necessary to provide special programmes for special groups based on their special needs.

WOMEN'S EDUCATION

In recognition of the importance of education of girls and women in accelerating socio-economic development, the government has formulated a variety of measures from time to time in this direction. Special programmes for promotion of girls' education were initiated as early as 1957-58. The main schemes initiated were provision of attendance scholarships for girl students, appointment of school mothers, construction of quarters for women teachers and payment of stipend for teachers training courses. It was observed that there had been gradual but progressive increase in the enrolment of girls over the plan periods and that the gap in the education of boys and girls appears to have been narrowing down during the last two decades. At the end of 1977-78, 68 per cent of girls in the age group 6–11 years are reported to have attended primary schools as against 32.4 per cent at the end of first plan. By the end of 1977-78, 7.13 crore children in the age group 6–11 years were going to schools and girls constituted 39.3 per cent (2.80 crore) of total school going children. As for the attendance in age group 11–14, the enrolment was 1.87 crore girls accounting for 31.2 per cent (60 lakhs) of the total. At the end of First Plan the percentage of girls attending primary/middle schools was 32.4 per cent. Whereas in 1977-78, it had increased to 68.2 per cent in 6–14 age group. Enrolment for the secondary education increased from 0.17 per cent in 1950-51 to 10.7 per cent in 1977-78.

The National policy statement on adult education programme, gives the highest priority to the education of adult women in the age group 15+. It aims at (i) making women and men more conscious of their rights and responsibilities, the implication of law governing women's status in society and developing an understanding about the various manifest and concealed ways which cause women's oppression; (ii) assisting women to achieve economic viability through acquisition of literacy and other necessary skills and resources; (iii) providing access to knowledge in other areas, particularly in health, child care, nutrition, family planning etc. and (iv) assisting women to form their own groups for learning and productive activity and to strengthen their participation and voice in the developmental process.

There were about 3.42 crore girls at schools in 1976-77—2.63 crores in classes I to V, 54.62 lakhs in classes VI to VIII and 24.77 lakhs in classes IX to XII.

TABLE 5·5
ACHIEVEMENTS IN ADULT EDUCATION

(*lakhs*)

Age group	1961				1971			
	Literates		Illiterates		Literates		Illiterates	
	No.	Per-centage	No.	Per-centage	No.	Per-centage	No.	Per-centage
5-14	336·6	29·5	803·2	70·5	531·0	35·2	976·8	64·8
15-24	263·3	36·0	468·8	64·0	436·5	48·2	469·2	51·8
25-34	192·3	28·5	481·9	71·5	267·9	34·8	502·2	65·2
35+	262·7	22·3	917·7	77·7	378·4	25·2	1,122·9	74·8

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

LITERACY

In 1951, 16.6 per cent of the people in India could read and write. The percentage went up to 24.0 in 1961 and to 29.44 in 1971. According to the 1971 census (see table 5.6), Kerala had the highest literacy rate, 69,75 per cent, Tamil Nadu and Maharashtra came next with 45.77 and 45.40 per cent respectively. Chandigarh led the union territories with a percentage of 70.43. Despite the rise in the literacy rate and the total number of literates, the number of illiterates has increased from 33.4 crores in 1961 to 38.6 crores in 1971 due to fast growing population. Rural folk and women form the bulk of illiterates. In 1971, more than half the people, nearly 60 per cent were literate in urban areas whereas less than one fourth of the rural population, 27.89 per cent, was literate. Kerala topped the states in women's literacy also, the percentage being 62.53. Maharashtra with 31.00 and Tamil Nadu with 30.92 came second and third respectively. Among the union territories, first place was held again by Chandigarh with 63.15 per cent.

RURAL HIGHER EDUCATION

The scheme of rural higher education was launched in 1956 with the object of providing higher education, after the secondary stage, to the rural youth and inculcating in them a spirit of service to the community and sympathy for the rural way of life, besides training them for careers in the rural development programmes of the central and state governments. All the rural institutes under this scheme which were earlier affiliated to the National Council for Rural Higher Education, have now been affiliated to the neighbouring universities and the concerned state governments. One of the rural institutes, namely, the Gandhigram Rural Institute in Madurai district (Tamil Nadu) has been declared to be a "deemed" university. This Institute has also been entrusted with the responsibility of conducting the examination of private candidates on behalf of the National Council for Rural Higher Education.

SCHOLARSHIPS FOR FOREIGN STUDENTS

Foreign students are offered scholarships for higher education and training in India under various schemes. Under the General Cultural Scholarship Scheme, the government awards 180 scholarships every year to the nationals of selected African, Asian and other foreign countries. At present, about 893 scholars are studying in different universities and other institutions in India. Scholarships have been awarded in the fields of agriculture, engineering and technology, medicine, pharmacy, arts and humanities. Under a scheme formulated in 1972-73, 100 scholarships were awarded to the nationals of Bangladesh. At present, about 250 such students are pursuing their studies in India. Scholarships are also awarded to nationals of those countries with whom India has Cultural Exchange Agreements. Other schemes include Reciprocal Scholarship Scheme, Commonwealth Scholarships/Fellowship Plan—Indian Awards and Technical Co-operation Scheme of the Colombo Plan.

RESEARCH AND TRAINING

The National Council of Educational Research and Training (NCERT), which was established in 1961, acts as the principal agency of academic advice to the Ministry of Education on matters pertaining to school education and undertakes the implementation of the policies and programmes of the Ministry. The Council works in cooperation with the state education departments and universities and

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

other institutions for promoting school education. It also maintains close contacts with international organisations. The results of the investigations conducted by the Council are made available to the public through books, journals and other literature.

The Council has the National Institute of Education at New Delhi, a research organisation which consists of various academic departments and units. The Council also runs four regional colleges of education at Ajmer, Bhopal, Bhubaneswar and Mysore. These colleges promote and participate in a large number of extension activities in the field of school education and conduct Summer Institutes, particularly for science teachers.

The Council also maintains a network of 18 field offices to keep a close liaison with state governments. These field offices keep the Council informed of the programmes under implementation in the states and assist the states in utilising the work done by the Council, especially in the field of curriculum development. The Council has also developed the new curriculum and syllabi for classes I to XII for the 10+2+3 pattern of education. The Council brings out model textbooks in all the subjects at the school stage in English and Hindi. These books are used in the states in adapted form. The Council brings out three journals in the field of school education.

The Council also runs a centre for educational technology at New Delhi. It was set up in 1972-73 for undertaking research and development work in the effective production and utilisation of media in education, development of appropriate technology and delivery systems, carrying out training programmes relating to various aspects of educational technology and evaluation of educational materials.

Indian Council of Historical Research

The Indian Council of Social Science Research, an autonomous enunciates and implements a national policy of historical research and encourages scientific writing of history. It acts as a forum for historians for exchange of views. It operates research projects, offers fellowships and publishes theses, monographs and translated source materials and important history books.

INDIAN COUNCIL OF SOCIAL SCIENCE RESEARCH

The Indian Council of Social Science Research, an autonomous organisation established by the Government of India in 1969, is composed of 25 members; a chairman, 18 social scientists, 6 representatives of the government and a member-secretary (appointed by the ICSSR with the approval of the government). Its objectives are to review the progress of social science research from time to time, to give advice to its users in government or outside, to sponsor research programmes and give grants to institutions and individuals for research in the field of social sciences. The Council has six regional centres located at Bombay, Hyderabad, Calcutta, Shillong, New Delhi and Chandigarh. At present, the Council gives grants-in-aid to 17 research institutes.

Indian Institute of Advanced Study

The Indian Institute of Advanced Study, Simla, set up in 1965, is a Centre for advanced research in the humanities, social sciences and natural sciences.

It is a community of scholars engaged in exploring new frontiers of knowledge aimed at making major conceptual developments and at offering inter-disciplinary perspectives on questions of contemporary

TABLE 5·6

EFFECTIVE LITERACY RATES, 1971 FOR INDIA, STATES AND UNION TERRITORIES

State/Union Territory		Total Population			Total Literates			Percentage of Literacy		
		P	M	F	P	M	F	P	M	F
1	2	3	4	5	6	7	8	9	10	11
INDIA[1]	T	**46,86,03,089**	**24,38,48,803**	**22,47,54,286**	**16,14,14,962**	**11,20,43,411**	**4,93,71,551**	**34·45**	**45·95**	**21·97**
	R	**37,35,91,396**	**19,23,13,231**	**18,12,78,165**	**10,41,97,380**	**7,60,57,547**	**2,81,39,833**	**27·89**	**39·55**	**15·52**
	U	**9,50,11,693**	**5,15,35,572**	**4,34,76,121**	**5,72,17,582**	**3,59,85,864**	**2,12,31,718**	**60·22**	**69·83**	**48·84**
1. Andhra Pradesh	T	3,74,85,068	1,90,03,247	1,84,81,821	1,06,89,665	73,03,297	33,86,368	28·52	38·43	18·32
	R	3,01,97,605	1,52,56,896	1,49,40,709	67,33,998	48,33,560	19,00,438	22·30	31·68	12·72
	U	72,87,463	37,46,351	35,41,112	39,55,667	24,69,737	14,85,930	54·28	65·92	41·96
2. Assam	T	1,21,28,417	64,71,723	56,56,694	41,16,771	28,29,242	12,87,529	33·94	43·72	22·76
	R	1,09,99,915	58,14,592	51,85,323	33,65,324	23,54,789	10,10,535	30·59	40·50	19·19
	U	11,28,502	6,57,131	4,71,371	7,51,447	4,74,453	2,76,994	66·59	72·20	58.76
3. Bihar	T	4,81,31,372	2,47,04,179	2,34,27,193	1,12,37,613	88,39,365	23,98,218	23·35	35·78	10·24
	R	4,32,47,726	2,19,68,524	2,12,79,202	87,07,072	71,11,190	15,95,882	20·13	32·37	7·50
	U	48,83,646	27,35,655	21,47,991	25,30,541	17,28,205	8,02,336	51·82	63·17	37·35
4. Gujarat	T	2,28,38,394	1,18,32,989	1,10,05,405	95,55,238	63,63,748	31,91,490	41·84	53·78	29·00
	R	1,63,28,767	83,79,005	79,49,762	54,39,395	38,31,076	16,08,319	33·31	45·72	20·23
	U	65,09,627	34,53,984	30,55,643	41,15,843	25,32,672	15,83,171	63·23	73·33	51·81
5. Haryana	T	84,59,151	45,56,018	39,03,133	26,99,179	20,05,424	6,93,755	31·91	44·02	17·77
	R	69,23,710	37,23,662	32,00,048	17,94,925	14,39,614	3,55,311	25·92	38·66	11·10
	U	15,35,441	8,32,356	7,03,085	9,04,254	5,65,810	3,38,444	58·89	67·98	48·14
6. Himachal Pradesh	T	29,64,464	15,16,749	14,47,715	11,05,825	7,63,192	3,42,633	37·30	50·32	23·67
	R	27,51,254	13,93,170	13,58,084	9,59,375	6,70,836	2,88,539	34·87	48.15	21·25
	U	2,13,210	1,23,579	89,631	1,46,450	92,356	54,094	68·69	74·73	60·35
7. Jammu and Kashmir	T	39,52,135	21,20,546	18,31,589	8,57,964	6,57,660	2,00,304	21·71	31·01	10·94
	R	31,99,819	17,14,308	14,85,511	5,30,354	4,42,635	87,719	16·57	25·82	5·90
	U	7,52,316	4,06,238	3,46,078	3,27,610	2,15,025	1,12,585	43·55	52·93	32·53
8. Karnataka	T	2,50,77,251	1,28,44,451	1,22,32,800	92,35,127	62,31,363	30,03,764	36·83	48·51	24·55
	R	1,89,03,331	96,00,567	93,02,764	55,72,190	39,82,775	15,89,415	29·48	41·48	17·09
	U	61,73,920	32,43,884	29,30,036	36,62,937	22,48,588	14,14,349	59·33	69·32	48·27

[1]Excluding 0-4 age group.

T = Total R = Rural U = Urban

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

1	2	3	4	5	6	7	8	9	10	11
9. Kerala . .	T	1,84,91,971	91,46,093	93,45,878	1,28,98,072	70,54,096	58,43,976	69·75	77·13	62·53
	R	1,54,64,074	76,31,780	78,32,294	1,05,99,409	58,04,787	47,94,622	68·54	76·06	61·22
	U	30,27,897	15,14,313	15,13,584	22,98,663	12,49,309	10,49,354	75·92	82·50	69·33
10. Madhya Pradesh	T	3,49,71,312	1,81,00,306	1,68,71,006	92,23,084	70,16,655	22,06,429	26·37	38·77	13·08
	R	2,91,87,288	1,49,79,538	1,42,07,750	58,61,418	48,20,815	10,40,603	20·08	32·18	7·32
	U	57,84,024	31,20,768	26,63,256	33,61,666	21,95,840	11,65,826	58·12	70·36	43·77
11. Maharashtra	T	4,31,57,442	2,24,43,287	2,07,14,155	1,97,52,608	1,33,31,079	64,21,529	45·77	59·40	31·00
	R	29,44,926	1,48,27,390	1,46,22,536	1,06,28,699	75,56,382	30,72,317	36·09	50·96	21·01
	U	1,37,07,516	76,15,897	60,91,619	9,123,909	57,74,697	33,49,212	66·56	75·82	54·98
12. Manipur .	T	9,17,845	4,64,403	4,43,442	3,53,090	2,49,383	1,03,707	38·47	53·70	22·87
	R	7,94,973	3,02,206	3,92,767	2,77,756	2,02,371	75,385	34·94	50·32	19·19
	U	1,22,872	62,197	60,675	75,334	47,012	28,322	61·31	75·59	46·68
13. Meghalaya .	T	8,50,833	4,29,603	4,11,230	2,98,312	1,77,772	1,20,540	35·06	40·44	29·31
	R	7,21,910	3,69,131	3,52,779	2,02,327	1,22,220	80,107	28·03	33·11	22·71
	U	1,28,923	70,472	57,451	95,985	55,552	40,433	74·45	78·83	69·17
14. Nagaland .	T	4,51,806	2,43,836	2,07,970	1,41,518	96,681	44,837	31·32	39·65	21·56
	R	4,06,742	2,12,034	1,94,708	1,10,277	73,593	36,684	27·11	34·71	18·84
	U	45,064	31,802	13,262	31,241	23,088	8,153	69·33	72·60	61·48
15. Orissa . .	T	1,88,19,069	95,01,641	93,17,428	57,45,399	42,27,806	15,17,593	30·53	44·50	16·29
	R	1,72,33,213	86,32,307	86,00,906	48,41,184	36,28,327	12,12,857	28·09	42·03	14·10
	U	15,85,856	8,69,334	7,16,522	9,04,215	5,99,479	3,04,736	57·02	68·96	42·53
16. Punjab .	T	1,17,91,168	63,47,946	54,43,222	45,62,123	29,34,281	16,27,842	38·69	46·22	29·91
	R	89,76,138	48,24,903	41,51,235	28,73,903	19,19,586	9,54,317	32·08	39·78	22·99
	U	28,15,030	15,23,043	12,91,987	16,88,220	10,14,695	6,73,525	59·97	66·62	52·13
17. Rajasthan .	T	2,17,70,367	1,14,40,534	1,03,29,833	49,14,293	38,75,435	10,38,858	22·57	33·87	10·06
	R	1,78,83,567	93,55,310	85,28,257	29,39,348	25,29,873	4,09,475	16·44	27·04	4·80
	U	38,86,800	20,85,224	18,01,576	19,74,945	13,45,562	6,29,383	50·81	64·53	34·94
18. Sikkim .	T	1,84,099	1,00,205	83,894	37,230	28,579	8,651	20·22	28·52	10·31
	R	1,66,975	89,831	77,144	28,149	22,320	5,829	16·86	23·85	7·56
	U	17,124	10,374	6,750	9,081	6,259	2,822	53·03	60·33	41·81
19· Tamil Nadu	T	3,58,09,975	1,81,12,317	1,76,97,658	1,62,56,393	1,07,83,783	54,72,610	45·40	59·54	30·92
	R	2,49,29,522	1,25,21,901	1,24,07,621	92,31,587	65,18,218	27,13,369	37·03	52·05	21·87
	U	1,08,80,453	55,90,416	52,90,037	70,24,806	42,65,565	27,59,241	64·56	76·30	52·16
20· Tripura .	T	13,31,995	6,87,556	6,44,439	4,82,082	3,22,017	1,60,065	36·19	46·84	24·84
	R	11,88,528	6,13,163	5,75,365	3,78,149	2,61,261	1,16,888	31·82	42·61	20·32
	U	1,43,467	74,393	69,074	1,03,933	60,756	43,177	72·44	81·67	62·51

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

1	2	3	4	5	6	7	8	9	10	11
21. Uttar Pradesh	T	7,53,79,871	4,03,71,404	3,50,08,467	1,91,73,970	1,48,12,311	43,61,659	25·44	36·69	12·46
	R	6,46,83,178	3,44,39,343	3,02,43,835	1,37,69,262	1,12,69,375	2,49,98,87	21·29	32·72	8·27
	U	1,06,96,693	59,32,061	47,64,632	54,04,708	35,42,936	18,61,772	50·53	59·73	39·07
22. West Bengal .	T	3,78,56,092	2,02,39,066	1,76,17,026	1,47,11,739	1,00,31,891	46,79,848	38·86	49·57	26·56
	R	2,80,02,244	1,45,44,403	1,34,57,841	85,77,954	61,48,637	24,29,317	30·63	42·27	18·05
	U	98,53,848	56,94,663	41,49,185	61,33,785	38,83,254	22,50,531	62·25	68·19	54·11
23. Andaman and Nicobar Islands	T	98,126	61,478	36,648	50,191	36,160	14,031	51·15	58·82	38·29
	R	75,013	46,202	28,811	34,059	24,895	9,164	45·40	53·88	31·81
	U	23,113	15,276	7,837	16,132	11,265	4,867	69·80	73·74	62·10
24. Arunachal Pradesh . .	T	3,98,085	2,17,066	1,81,019	52,791	44,776	8,015	13·26	20·63	4·43
	R	3,83,017	2,06,309	1,76,708	44,067	37,744	6,323	11·51	18·29	3·58
	U	15,068	10,757	4,311	8,724	7,032	1,692	57·20	65·37	39·25
25. Chandigarh .	T	2,24,849	1,30,037	94,812	1,58,371	98,495	59,876	70·43	75·74	63·15
	R	20,975	12,661	8,314	7,422	5,610	1,812	35·38	44·31	21·79
	U	2,03,874	1,17,376	86,498	1,50,949	92,885	58,064	74·04	79·13	67·13
26. Dadra and Nagar Haveli	T	61,277	30,569	30,708	11,105	8,188	2,917	18·12	26·79	9·50
	R	61,277	30,569	30,708	11,105	8,188	2,917	18·12	26·79	9·50
	U	—	—	—	—	—	—	—	—	—
27. Delhi . .	T	35,36,396	19,82,459	15,53,937	23,01,605	14,38,268	8,63,337	65·08	72·55	55·56
	R	3,50,438	1,93,708	1,56,730	1,51,690	1,12,413	39,277	43·29	58·03	25·06
	U	31,85,958	17,88,751	13,97,207	21,49·915	13,25,855	8,24,060	67·48	74·12	58·98
28. Goa, Daman and Diu .	T	7,45,700	3,74,023	3,71,677	3,83,864	2,34,178	1,49,686	51·48	62·61	40·27
	R	4,47,188	2,68,188	2,79,000	2,56,135	1,56,710	99,425	46·81	58·43	35·64
	U	1,98,512	1,05,835	92,677	1,27,729	77,468	50,261	64·34	73·20	54. 23
29. Lakshadweep	T	26,832	13,488	13,344	13,889	9,081	4,808	51·76	67·33	36·03
	R	26,832	13,488	13,344	13,889	9,081	4,808	51·76	67·33	36·03
	U	—	—	—	—	—	—	—	—	—
30. Mizoram .	T	2,85,128	1,47,282	1,37,846	1,78,793	1,03,324	75,469	62·71	70·15	54·75
	R	2,51,573	1,29,750	1,21,823	1,51,405	88,201	63,204	60·18	67·98	51.88
	U	33,555	17,532	16,023	27,388	15,123	12,265	81·62	86·26	76·55
31. Pondicherry	T	4,06,599	2,04,302	2,02,297	2,17,058	1,35,851	81,207	53·38	66. 50	40·14
	R	2,34,678	1,18,392	1,16,286	1,05,553	70,465	35,088	44·98	59·52	30·17
	U	1,71,921	85,910	86,011	1,11,585	65,386	46,199	64·86	76·11	53·62

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

relevance. An essential part of the Institute's activities is the organisation of seminars and workshops in which outstanding scholars and experts are invited. To ensure speedy and wide dissemination of the contents and conclusions of seminars and workshops and of research findings, the Institute operates its publication programmes which include transactions of the Institute, monographs and occasional papers. A committee appointed by the government has recently reviewed the functioning of the Institute and recommended several measures for its restructuring.

DEVELOPMENT OF HINDI

The central Ministry of Education runs several programmes for the enrichment and spread of Hindi. Among these are : (a) evolution and finalisation of Hindi terminology; (b) preparation of dictionaries; (c) preparation of linguaphone records, language lessons and tapes; and (d) publication of popular books in collaboration with private publishers. For the spread of Hindi, the activities include (i) rendering financial assistance to governments of non-Hindi speaking states for the training and appointment of Hindi teachers in their schools; (ii) encouraging the learning of Hindi on voluntary basis through correspondence courses; (iii) providing financial assistance to voluntary organisations in non-Hindi speaking states for holding Hindi teaching classes; (iv) giving awards to Hindi writers belonging to non-Hindi speaking states; and (v) propagation of Hindi in other countries. Through the *Kendriya Hindi Sansthan,* Agra, the central government promotes the development of improved methodology for teaching Hindi to non-Hindi speaking students, preparation of suitable teaching materials, and development of improved teaching methods. Through the Central Hindi Directorate, the government runs programmes relating to the publication of Hindi books and their free distribution in non-Hindi speaking states.

MODERN INDIAN LANGUAGES

Under the scheme for the development of modern Indian languages, the central government gives financial assistance to voluntary organisations for bringing out publications like encyclopaedias, dictionaries, books of knowledge and books of scientific interest. Grants are given for holding literary conferences, seminars and exhibitions for the development of Indian languages. Assistance is also given by way of purchasing copies of printed publications. State governments are given special help for the production of university-level books in regional languages. A Bureau for promotion of Urdu called *Taraqui-e-Urdu* Board has been set up for the production of educative literature in Urdu. A scheme for the publication of such books in Sindhi is also in operation.

The government also provides facilities for the study of languages other than the mother-tongue. For this, the Central Institute of Indian Languages, Mysore, develops improved teaching methodology, prepares teaching materials and trains second language teachers at the regional language centres of the Institute. The Institute also conducts research necessary for this purpose. The study of tribal languages is one of its important functions.

Foreign Languages Institute

The Central Institute of English and Foreign Languages, Hyderabad, trains teachers in the teaching of English and foreign languages, development of teaching methodology and of teaching materials for use by Indian teachers and students of these languages. A regional

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

centre has been set up at Shillong for accelerating its activities in the eastern region. From July 1973, the Institute is deemed to be a university.

YOUTH SERVICES

The main objectives of the central government's youth policy are to provide opportunities to young people to make constructive contribution to society, fulfil youth aspirations by providing avenues for young people to be actively involved in the national mainstream and enable them to contribute fruitfully in the task of national reconstruction.

Nehru Yuvak Kendras

To mobilise student and non-student youth for constructive nation building activities 255 youth centres known as *Nehru Yuvak Kendras* have been established in various states and union territories. Of these 190 have become operational by October 1979 and the remaining are in the process of establishment. The activities of these centres include non-formal education for young people in the age group 15–35 and their participation in creative activities, development of competitive sports, physical education, encouragement of talent in the field of sports, particularly in the rural areas and community service involving youth participation in eradication of illiteracy, health education and sanitation programmes and help in carrying out land reforms.

National Service Scheme

The National Service Scheme, launched in 1969, aims at providing under-graduate students with opportunities for meaningful social service benefitting the community in a variety of fields. Such activities include youth participation in organising literacy classes, constructive development work with a potential of creating community assets, youth involvement in relief operations, slum clearance and organisation of mobile hospital service. During 1978-79, about 4 lakh students participated in the scheme.

SPORTS AND GAMES

Pending finalisation of the new national policy on sports, which is still under formulation in consultation with the All India Council of Sports, the Government of India's programme for promotion of physical education and sports during the year continued to be implemented within the broad framework of the guidelines laid down in the National Policy on Education, adopted by Parliament in 1968. The existing programmes are being implemented, keeping in view the complimentary nature of the broad-based, mass, physical and sports activity on the one hand and competitive sport aiming at excellence and high achievement on the other.

All India Council of Sports

The All India Council of Sports which advises the central government on matters relating to the promotion of sports and games continued to function. The Council considered the draft national sports policy prepared by one of its sub-committees and circulated it for comments among the national sports federations, state sports councils, universities, state governments etc., before finalising its recommendations.

In consultation with the Council, the government provided financial assistance to national sports federations/associations for visits of Indian sports teams abroad and vice-versa, organising of national championship and holding of coaching camps. Financial assistance

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

was also provided to the state sports councils for the development of physical facilities in sports, promotion of coaching programmes, for purchase of equipment and establishment/maintenance of rural sports centres.

National Sports Organisation

The National Sports Organisation aims at promoting excellence among college students in selected fields of sports and games. To achieve this the Organisation provides physical facilities in colleges and universities. It also arranges coaches, organises coaching camps and recommends students for sports talent scholarships. The scheme is implemented through the Association of Indian Universities and the University Grants Commission.

National Institutes of Sports

There are two National Institutes for the development of physical education and sports in the country. The Netaji Subhas National Institute of Sports, Patiala conducts the coaching courses in different sports disciplines to train qualified coaches. The Institute is now also offering two year 'Master's Diploma Course in Sports' Coaching. It has, so far, trained 4,412 sports coaches including 98 from foreign countries in 16 sports disciplines. The Institute also implements the national coaching scheme through a countrywide network of regional sports coaching centres being run in collaboration with the state sports councils and *Nehru Yuvak Kendras*. It also provides special coaching facilities for the national teams prior to their participation in international meets.

The Lakshmibai National College of Physical Education, Gwalior, provides teacher training facilities for three year Degree course, for post graduate studies and research in physical education. It also runs a three year summer course for in-service personnel leading to the Master's Degree of physical education. The College has so far turned out over 1,500 graduates and about 340 post graduates in physical education.

National Physical Fitness Programme

The scheme which was introduced in 1959 under the nomenclature of "National Physical Efficiency Drive" to popularise among the people the concept of physical fitness and also to arouse their enthusiasm for higher standard of physical efficiency and achievement has now been renamed as the 'National Physical Fitness Programme.' To make coverage under the Programme more broad-based, the categories of participants has been enlarged and revised to include sub-juniors,juniors, seniors and adults. The Scheme is being implemented in collaboration with the state education/sports departments and selected central agencies. At the central level the Lakshmibai National College of Physical Education, Gwalior, continues to function as the central agency for the implementation of the programme.

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

6 CULTURAL ACTIVITIES

Preservation of the cultural heritage of the country, inculcation of art consciousness among the people and promotion of high standards in the performing and creative arts are some of the objectives of the State policy. In keeping with this, the central and state governments strive for the promotion of art and culture through national and regional academies of art, dance, drama, music and letters. These institutions and the Department of Culture at the centre are helped in their objective by the media of mass communication and voluntary agencies. Apart from this, some eminent persons associated with the fine arts are, from time to time, nominated by the President of India to Rajya Sabha in recognition of their standing in these fields.

VISUAL ARTS

Painting

Important traditions of Indian painting include the murals of Ajanta, Ellora and other frescoes, the Buddhist palm leaf manuscripts, the Jain texts, the Deccan, the Mughal, the Rajput and the Kangra schools. The Bengal renaissance and the modern trends bring it to the present. While the modern trends in Europe and elsewhere have influenced modern Indian painting, Indian folk art and themes have also been successfully revived and accepted.

Architecture and Sculpture

Till the advent of modern trends, architecture and sculpture in India were inspired mainly through the religious motif. The best examples are the temples, mosques, fortresses, palaces and other monuments which dot the Indian landscape. Massive buildings that have come up after independence and the city of Chandigarh symbolise the beginning of the modern period of Indian architecture. Contemporary Indian sculptors have contributed substantially to the creation of a new awareness of mass, volume and space.

Handicrafts

From coarse carpets to finest muslins, exquisite cotton and silk saris, embroidered shawls, impressive creations in metals, unglazed and glazed pottery, fabulous jewellery—heavy tribal or costume or filigree—rugged or delicate woodwork, dolls and puppets are but a few creations of the rich and varied repertoire of Indian craftsmanship. The main inspiration is tradition handed down from generations. The heritage of tribal and village activity is sustained by providing economic support to the artisans and by export promotion. Every year, the best among the craftsmen are honoured by the nation as master craftsmen.

Lalit Kala Akademi

To promote the understanding of Indian art both within and outside the country, the Government of India established the Lalit Kala Akademi (Academy of Arts) in 1954. The Akademi strives to promote this objective through exhibitions, publications, work-shops and camps. Every year it holds a national exhibition and every three years, the Triennale-India, an international exhibition. The Akademi has brought out a series of monographs and portfolios on ancient Indian art and published the results of new research in Indian arts in its journals. It has also undertaken a programme to copy frescoes and murals in caves, temples, forts and palaces which are in danger of being lost.

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

The Akademi's publication programme includes a bi-annual art journal "Lalit Kala Contemporary", monographs on contemporary Indian artists and large multi-colour reproductions of paintings, sculptures and graphics.

The Akademi organises artists' camps, seminars and lectures and gives grants to recognised art organisations in the country. It honours eminent artists by making them Fellows. So far, 16 persons have been conferred Fellowships. Awards are given to artists on the occasion of the national exhibition.

National Gallery of Modern Art

The National Gallery of Modern Art, set up in 1954, has a collection of over 3,000 works of art, representing various styles, spanning more than a century. Among the distinguished Indian artists whose works are represented at the gallery are: Raja Ravi Varma, Abanindranath Tagore, Rabindranath Tagore, Gaganendranath Tagore, Nandlal Bose, Amrita-Sher-Gil, D. P. Roy Chowdhury, M. F. Hussain, N. S. Bendre, Biren De, Shanti Dave, G. R. Santosh and J. Swaminathan.

The collection includes sculptures, graphics and paintings by international modern artists like Jacob Epstein, Giorgio de Chirico, Sonia Delaunay, A. Tapies, Se Duk Lee, D. C. Daja and Peter Lubarada.

National Institute of Design

This institute was set up in 1961 at Ahmedabad by the central government in co-operation with the government of Gujarat and the Ford Foundation. It provides service, training and research in the fields of designs, in graphic arts, architecture and industry.

PERFORMING ARTS

Music

There are two main schools of classical music, namely, Hindustani and Karnatak. Both schools continue to survive mainly through an oral tradition being passed on by the teacher to the disciple and this has led to the existence of family traditions called the *gharanas* and the *sampradayas*.

In recent years there has been a great revival of interest in folk and tribal music which has been brought to the stage in cities. Growing in popularity is another category of music which has come to be known as light music.

The patronage to music is both state-supported and popular. The Sangeet Natak Akademi (National Academy of Music, Dance and Drama), All India Radio, films, voluntary organisations and cultural associations are the main agencies that have brought about a nation-wide awareness and appreciation of music.

Dance

Dance in India has an unbroken tradition of over 2,000 years. Its themes are derived from mythology, legends and classical literature. There are two main divisions of Indian dance, namely, classical and folk. Under classical are those dance-forms which are based on ancient dance-discipline and have rigid rules for presentation. Among the leading forms of classical Indian dance are *Bharata Natyam, Kathakali, Kathak, Manipuri, Odissi* and *Kuchipudi. Bharata Natyam* has roots in Tamil Nadu. *Kathakali* is the dance-drama of Kerala. *Kathak* is the principal classical dance of North India and was revitalized as a result of the fusion of Mughal influence with Indian culture. The state of Manipur in the eastern region has contributed a delicate, lyrical style of dance called *Manipuri. Odissi* from Orissa, once practised as a temple dance, is today widely interpreted by artistes. *Kuchipudi* is a

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

dance-drama from Andhra Pradesh. Its themes are culled from the epics the *Ramayana* and the *Mahabharata*. The folk and tribal dances of India are of numerous patterns.

Both the classical and folk dances of India owe their present popularity to institutions like the Sangeet Natak Akademi and training institutes and cultural organisations in different parts of the country. To promote study and training in different forms of dance and music, the Akademi awards Fellowships to scholars, performers and teachers.

Theatre

Theatre in India is as old as her music and dance. The classical theatre survives only in a few parts of the country, and the folk theatre can be seen in its regional variants in practically every linguistic region of the country. There is also the professional theatre, which is mainly urban-oriented. Besides, a rich tradition of puppet theatre is found in various parts of the country. Among the many forms prevalent are the string puppets, rod puppets, glove puppets and leather puppets (shadow theatre).

There are several semi-professional and amateur threatre groups active in many large cities, performing plays in Indian languages and in English.

Sangeet Natak Akademi

The Sangeet Natak Akademi (National Academy of Music, Dance and Drama), which was set up in 1953, fosters the development of dance, drama and music. As part of its co-ordinating and promotional activities, it holds competitions, seminars and music festivals, presents awards to outstanding performing artistes, gives grants to institutions of music, dance and drama and extends financial help to traditional teachers and scholarships to students. It subsidises and publishes research works on performing arts.

In view of the many theatrical, musical and dance forms prevalent in the country, the Akademi has set up a special unit for surveying and documenting them. Its disc and tape library has the largest collection of Indian classical, folk and tribal music, and dance and theatre items.

The Akademi is running two national institutions for imparting training in dance and drama. These are the *Kathak Kendra*, New Delhi and Jawaharlal Nehru Manipuri Dance Academy, Imphal. The Akademi has also been helping in the resurgence of the puppet theatre in the country.

The Akademi operates a scheme under which prizes are awarded to books in various Indian languages and in English on music, dance and drama. It honours outstanding performing artistes by making them Fellows and presents annual awards.[1] It holds from time to time a theatre festival in which theatre groups from different parts of the country present their histrionic talent. The Akademi is exploring new avenues of research in music, including acoustics. Researches in the physical acoustics and psychological responses have been carried out both in the Akademi and by outside agencies.

The Akademi has a gallery of musical instruments, *Asavari*, where a large number of classical, folk and tribal musical instruments are on display. *Yavanika*, another gallery, houses a representative collection of fascinating masks, puppets and folk theatre costumes.

The first of a series of displays on specific themes in *Yavanika* has

[1] For awards, see Appendices.

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

begun with an exhibition on "Ramayana in Traditional Theatre" for the *Dussehra-Diwali* season. Such displays from the Akademi Archives are now organised to coincide with seasonal/national festivals.

A major task of the Akademi is the preservation and documentation of the folk/tribal performing arts. For this purpose it has a documentation unit engaged in filming photography, recording and documenting the arts in the various regions. The Akademi has an archival collection of a large number of films, photographs, slides and tapes of recorded music. The material collected and collated is available for research students and scholars.

National School of Drama

The National School of Drama, New Delhi, set up in 1959 as a constituent unit of the Sangeet Natak Akademi, has been registered as an independent institution under the Societies Registration Act, 1860.

The activities of the School include training in the fields of acting, direction and production of drama, conducting and promoting research and survey in classical, traditional and modern drama, fostering cultural and academic contacts within India as well as other countries through exchange of personnel and research material.

Broadcasting

All India Radio has been contributing to bring about awareness and appreciation of Indian music—classical, light classical, folk and tribal.

The major programmes through which AIR propagates music are the weekly national programme of music; the weekly programme of classical music by young artists; the monthly national programme of regional (folk and light) music; the annual music competition to discover young talent and the annual music festival— the Radio *Sangeet Sammelan.*

The *Vividh Bharati* Service of AIR broadcasts popular film and light music.

Recorded excerpts of major musical festivals held in different parts of the country are also broadcast by AIR. Through overseas transmissions, it seeks to satisfy the cultural needs of Indian nationals living abroad. The music archives of AIR are among the most important collections of music records in the country.

LITERATURE

Rediscovery of ancient and medieval Indian literature and development of modern literature in the major Indian languages and in English mark the literary activities in present day India. A large number of literary periodicals and magazines, literary institutions and All India Radio have given impetus to the growth of modern Indian literature.

Sahitya Akademi

The Sahitya Akademi was set up in New Delhi in 1954 for the development of Indian letters. Some of the main functions of the Akademi are : translation of literary works from one Indian language to another and from non-Indian to Indian languages; publication of works on literary history and criticism, books of reference like bibliographies and biographies and works in Devanagari and other Indian scripts and popularisation of the study of literature among the people. The Akademi has regional offices at Bombay, Calcutta and Madras.

An important publication of the Akademi is the *National Bibliography of Indian Literature* (1901-1953) in four volumes, covering books of literary merit in all the major Indian languages and in English published in India or written by Indian authors. These cover English

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

and all the major Indian languages except Dogri, Konkani, Maithili, Manipuri, Nepali and Rajasthani for which a fifth volume is under preparation. The Akademi's publications on 31 March 1978 numbered 900. The Sahitya Akademi publishes a bi-monthly journal in English, *Indian Literature,* and a half-yearly journal in Sanskrit, entitled *Sanskrita Pratibha.*

The Akademi has sponsored two series of publications, first, histories of literature of various languages of India and the second, sixty monographs entitled "Makers of Indian Literature" with a brief biography and literary assessment of writers spread over the entire country from the earliest times to the present day.

The Akademi honours eminent men and women of letters by electing them Fellows. It awards prizes to works of outstanding merit in English and in major Indian languages[1].

Encouragement to Young Talent

Young artists of outstanding promise in the age-group of 18-28 years are awarded 75 scholarships every year for advance training in *Hindustani* music, classical forms of Indian dances, traditional theatre, drama, painting and sculpture. A scholar gets Rs 350 a month for two years.

Talented Children

Talented children in the age-group of 10-14 years are awarded 100 scholarships every year for developing their talent in various fine arts such as music, dance, painting and sculpture. Twenty five scholarships are reserved for children belonging to *Gharanas/Sampradayas.* A sum of Rs 600 a year is paid to those who undergo training at the place of their residence and double that sum to those who have to shift to a new place for training. In both cases, tuition fee up to Rs 1,000 a year is also reimbursed.

Fellowships

To provide basic financial support to outstanding persons for creative work in various fields of the performing, the plastic and the literary arts, in the age-group of 25-65 years, 15 senior Fellowships and 35 junior Fellowships of the value of Rs 1,000 and Rs 500 respectively per month each tenable for two years, are being awarded every year since 1979-80. These Fellowships are given for specified schemes and projects either suggested by the artists themselves or selected at the initiative of the central government.

Financial Assistance to Old and Needy Artists

Persons distinguished in letters, arts and such other walks of life who are above 58 years of age and have an income of less than Rs 400 a month are considered for grant of financial assistance to the tune of Rs 200 a month.

BOOKS

India is the seventh largest producer of books in the world and ranks third, in the production of English titles, after USA and UK. About 13,000 titles were published during 1978-79.

National Book Development Board

The National Book Development Board, which was set up in 1967, is the principal advisory body for the development of the book industry and trade in the context of the overall requirements of the country. It has representatives of different sectors of book industry, namely, publishers, authors, printers and booksellers as well as various governmental and non-governmental agencies.

[1] For awards, see Appendices.

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

National Book Trust

The National Book Trust (NBT), set up in 1957 as an autonomous organisation, produces and encourages the production of good literature and makes it available at low prices to libraries, educational institutions and the public. It also organises book fairs, exhibitions, seminars and symposia. Since 1970, NBT has been subsidising the publication of university level books in English by Indian authors for student community.

Since its inception and up to the end of December 1979, NBT has brought out 932 books in English and in major Indian languages. The bulk of NBT's publication programme is covered under such series as 'India the Land and the People', 'National Biography', 'Popular Science', 'World of Today' and 'Young India Library'. In addition, it brings out books of general nature outside the series.

NBT operates two special projects namely, the *Adhan Pradhan* series which is intended for adult readers and the *Nehru Bal Pustakalaya* which provides supplementary reading for children. Both projects relate to national integration and provide communication channels on an inter-regional and inter-linguistic basis by translation of outstanding books in one Indian language into other languages. Up to December 1979, NBT had released 442 books under the *Adhan Pradhan* series and 601 books under the *Nehru Bal Pustakalaya* programme. To commemorate 1979 as the Year of the Child and to promote children's literature in regional languages, NBT brought out anthologies of contemporary stories for children in 12 languages, namely, Assamese, Bengali, Gujarati, Hindi, Kannada, Malayalam, Marathi, Oriya, Punjabi, Tamil, Telugu and Urdu. Another special project was a book on 'Festivals of India' profusely illustrated with photographs in colour as well as black and white.

The National Book Trust subsidised the publication of 300 books in different disciplines up to the end of December 1979. It organised nine national book fairs and 90 regional book exhibitions in important metropolitan cities of India.

Fourth World Book Fair

The National Book Trust organised in co-operation with the Indian book industry the Fourth World Book Fair in New Delhi from 29 February to 11 March 1980. One of the highlights of the fair was an international seminar on "Publishing for rural areas in developing countries".

Import of Books

No import licence is required for import of educational, scientific and technical books. During 1977-78, books and publications, including periodicals and journals, worth about Rs 18.64 crores were imported.

Export of Books

India, as a very large producer of quality books, has a growing potential for exporting books. Efforts are being made to encourage the sale of Indian books abroad and to secure printing jobs. India's participation in international book fairs and exhibitions helps in publicising Indian books.

During 1979-80, India participated in the Singapore Festival of Books, International Book Fairs held in Moscow, London, Frankfurt and Cairo and the National Book Fair in Ghana. Special exhibitions of Indian books were also organised with the help of the Indian Missions in Mauritius, Kenya, Tanzania, Egypt and Nigeria.

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

Indian books were also displayed in the various international children's book exhibitions held to celebrate the international year of the child in Tokyo, Bangkok, Manila, Caracas and Addis Ababa.

Publications Division

The Publications Division of the Ministry of Information and Broadcasting produces books, pamphlets, albums and journals to provide the lay reader with information regarding the diverse aspects of national life and culture and the teachings of national leaders.

A major project of the Division is the publication of the *Collected Works of Mahatma Gandhi*. So far 78 volumes in English and 71 volumes in Hindi have been published. In all 90 volumes are planned to be brought out.

Books for Children

Books for children are brought out, among others, by the Children's Book Trust, the National Book Trust, the Publications Division and the National Council of Educational Research and Training.

Raja Rammohun Roy National Educational Resources Centre

The Raja Rammohun Roy National Educational Resources Centre was set up in New Delhi in 1972 to serve as an information centre to promote Indian authorship and indigenous book production at university level and for the documentation and statistical analysis of the printed materials imported from abroad so as to arrive at a meaningful import policy for books. It has a large reference collection of university level books produced indigenously as well as the subsidised editions of foreign text-books brought out under the Union Education Ministry's collaboration programmes with the Governments of UK, USA and the Soviet Union. This collection facilitates authors, publishers and others interested in the field to identify the subject fields and levels where books need to be produced indigenously. In order to publicise the availability of Indian books, the Centre has also been organising exhibitions of books at various university centres. The Centre also arranges evaluation by subject specialists, of selected books and circularises particulars of the books found suitable for use by various universities, etc., so that they could be increasingly used. It conducts sample surveys on various aspects of the production and use of university level books.

By issuing quarterly supplements, the Centre also keeps up to date the national catalogue of university level books which was compiled in 1971 listing the books brought out in the country since 1965, in Indian languages and English, in various disciplines. The Centre has recently been designated as the national agency for introducing the International Standard Book Numbering System in India. Besides, it brings out bibliographies, newsletters, etc., on various topics of interests to meet the demands of authors and research scholars.

Copyright

The Copyright Act, 1957, which amended and consolidated all previous laws on the subject, came into force on 21 January 1958. A Copyright Board with powers of adjudication and a Copyright Office have been set up under this Act. Since its inception and up to 31 December 1979 the Copyright Office had registered 35,109 works. Out of these 26,052 are artistic works, 9,046 literary works and 11 cinematograph films. Protection under the Act has also been extended to the works originating from foreign countries through the International Copyright Order.

India is a member of the Universal Copyright Convention—the Berne Convention—for the protection of literary and artistic works;

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

the Geneva convention for the protection of producers of phonograms against unauthorised duplication of their phonograms and the convention establishing the World Intellectual Property Organisation.

Under the annual copyright training programme 1979 of the World Intellectual Property Organisation (WIPO), which is a UN specialised agency, India received two trainees, one each from Fiji and Indonesia. India also received four UNESCO trainees, one each from Afghanistan, Nepal, Singapore and Thailand.

LIBRARIES

There are more than 57,000 libraries of all descriptions in the country, including ten libraries attached to institutions declared by Parliament as of national importance and over 5,000 specialised libraries attached to the various departments of the central and state governments.

Though the work relating to libraries is a state subject, the central Department of Culture, administers a few central libraries and gives financial assistance to voluntary organisations running public libraries. To ensure regulated development of public libraries, legislation has been enacted by the governments of Andhra Pradesh, Karnataka, Maharashtra Tamil Nadu and West Bengal.

Copyright Libraries

Under the Delivery of Books and Newspapers (Public Libraries) Act, 1954, four libraries are entitled to receive a copy of every new book and magazine published in the country. At present, there are three such libraries, namely, National Library, Calcutta, Central Library, Bombay and Connemara Public Library, Madras.

Manuscript Libraries

The manuscript libraries and the libraries of oriental learning which are largely financed by the central government are spread all over the country. In addition, there are over 500 other collections belonging to state governments and private agencies which have hundreds of thousands of manuscripts.

Some of the important manuscript libraries are : Saraswati Mahal Library, Thanjavur, Tamil Nadu; Government Oriental Manuscript Library, Madras; Khuda Baksh Oriental Public Library, Patna; Raza Library, Rampur, Uttar Pradesh; Oriental Research Libraries at Pune, Maharashtra and Vadodara, Gujarat; Sanskrit University Library, Varanasi and Visheshwaranand Vedic Research Institute Library, Hoshiarpur and Maulana Azad Aligarh Muslim University Library, Aligarh.

Other Libraries

There are also specialised libraries providing facilities to researchers. Prominent among them are at the Indian Council of World Affairs, New Delhi; Indian Statistical Institute, Calcutta; Gokhale Institute, Pune; Theosophical Society, Madras; National Council of Applied Economic Research, Delhi and the Indian Institute of Public Administration, New Delhi.

Same other leading libraries are the Delhi Public Library (6.8 lakh volumes) and the Central Secretariat Library, New Delhi (4 lakh volumes). Apart from these, some of the bigger universities also have sizable collections.

Gazetteers

A Central Gazetteers Unit in the Union Ministry of Education, and Culture, edits the central gazetteers and plans and coordinates the work of the state and district gazetteers. So far, four volumes of the

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

Gazetter of India, namely, 'Country and People', 'History and Culture' and 'Economic Structure and Activities' and 'Administration and Public Welfare' have been released. More than 300 of the 337 district gazetteers have been revised. Also, 'Who's Who of Indian Martyrs' has been published in three volumes. The first volume includes patriots who were hanged or killed in the Indian freedom struggle after 1857 till 1947 and the second contains the life sketches of those patriots who sacrificed their lives outside the territory of British India, those who lost their lives in the movements for the establishment of responsible governments in the former princely states and martyrs of the liberation movements in the former Portuguese and French possessions in India. The third volume deals with the 1857 martyrs. A monograph on the penal settlement in the Andamans has also been brought out by the Unit.

FESTIVALS

Indian festivals are as varied in origin as they are large in number. Some of them celebrate the birthdays of national heroes and some other mark the change of seasons or of ripening of harvests. Yet others have their origin in religion and in myths and legends. The main festivals of all the important communities in the country are also observed as public holidays. Some of the main festivals common to all India are : Diwali, Dussehra, Holi, Shivaratri, Janmashtami, Ram Navami, Muharram[1], Id-ul-Zuha, Id-ul-Fitr, Id-i-Milad, Christmas, Good Friday, Vaisakhi, Guruparbs, Buddha Jayanti, Mahavir Jayanti and Jamshed Navaroz. The Republic Day on 26 January, the Independence Day on 15 August and the birthday of Mahatma Gandhi on 2 October are observed as national holidays.

ARCHAEOLOGY

All ancient and historical monuments of national importance are the responsibility of the central government, while other ancient and historical monuments are maintained by state governments.

The Archaeological Survey of India (ASI), New Delhi, which was founded in 1861, is concerned with the exploration and excavation of ancient sites, the preservation of centrally protected monuments and sites, architectural surveys, maintenance of gardens around monuments, chemical preservation of sculptures, monuments and other works of art, epigraphical research, maintenance of archaeological museums, publication of multi-form records and review and implementation of Ancient Monuments, Archaeological sites and Remains' Act 1958 and the Antiquities and Art Treasures Act, 1972.

Under the Antiquities and Art Treasures Act 1972, no object which is not less than one hundred years old (75 years in case of manuscripts, documents and the like) can be exported without a valid permit issued by the Director General, ASI. A permit is also required for the export of works of arts of some of the renowned artists which have been declared as art treasures under this Act. At all international exit points, an experts committee functions to issue non-antiquity certificates.

[1] Muharram, though not a festival, is included among festivals of India because of its observance with piety and pageantry by a large number of people all over India.

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

Permission or licence is required for filming and photographing with stands at centrally protected monuments and museums. It also conducts a post-graduate diploma course in archaeology.

The ASI has a library which is one of the oldest in the country. It contains rare material not only on India but also on south-east Asia and west Asia. There is a separate library of photographs.

Besides ASI, almost all the state governments have their own archaeological surveys or departments. University departments working in the field of archaeology carry out their research either independently or in co-operation with the state surveys and ASI. A Central Advisory Board of Archaeology co-ordinates the activities of the central and state archaeological surveys and the university research programmes in archaeology.

The ASI has also participated in the conservation and excavation programmes in Nepal, Afghanistan and Egypt.

Museums

The first museum in the country was set up at Calcutta in 1814. At present, there are over 360 museums in India.

The central government finances and administers a few central museums of art, archaeology, natural history, geology and commemorative and crafts museums, science technology and industry and rail transport.

Some of the important museums are : Indian Museum, Victoria Memorial Hall, Asutosh Museum, Calcutta; National Museum, National Gallery of Modern Art, National Museum of National History, Transport Museum, Nehru Memorial Museum and Library, New Delhi; Salar Jung Museum, Hyderabad; Prince of Wales Museum, Bombay; Government Museum, Madras, and the University Museum, Varanasi. There are several archaeological museums at ancient sites like Konarak, Nagarjunakonda, Nalanda, Sanchi and Sarnath and museum of handicrafts and textile designs and children's museums. A few scientific and technological museums have also been established.

Training facilities for museum personnel at the diploma level are at present provided by the Universities of Aligarh, Vadodara, Calcutta, Bhopal, and Varanasi and the Birla Institute of Technology, Pilani. In addition, the central government organises museum camps for in-service training and awards fellowships for training in India and abroad.

Archives

The National Archives of India, New Delhi, is the largest and perhaps the best organised record repository of non-current records in the whole of Asia. It is a clearing house for the scientific development of archives in the country. It caters to a large number of research scholars both Indian and foreign. The National Archives is carrying out a nation-wide programme for the survey and listing of private records and the publication of the National Register of Private Records. The organisation is also acting as the secretariat of the Indian Historical Records Commission. The National Archives has three record centres at Bhopal, Jaipur and Pondicherry.

INTERNATIONAL CULTURAL RELATIONS

Cultural Agreements

India has cultural agreements with 54 countries. They are : Afghanistan, Arab Republic of Egypt, Argentina, Australia, Algeria Baharin,

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

Bangladesh, Belgium, Brazil, Bulgaria, Cuba, Colombia, Czechoslovakia, Democratic People's Republic of Korea, Federal Republic of Germany, France, German Democratic Republic, Greece, Guyana, Hungary, Indoneia, Iran, Iraq, Italy, Japan, Jordan, Kuwait, Losotho, Mauritius, Mongolia, Mexico, Malaysia, Norway, People's Democratic Republic of Yemen, Philippines, Poland, Rumania, Republic of Korea, Rwanda, Sri Lanka, Senegal, Sudan, Syria, Somalia, Tunisia Thailand, Turkey, Tanzania, United Arab Emirates, USSR, Uganda, Vietnam, Yugoslavia, Zambia and Zaire. Closer cultural relations with some of these countries have found a practical shape in the form of cultural exchange programmes with 30 countries, namely, Afghanistan, Australia, Arab Republic of Egypt, Bangladesh, Belgium, Bulgaria, Cuba, Czechoslovakia, Federal Republic of Germany, France, German Democratic Republic, Hungary, Iran, Iraq, Mauritius, Mexico, Mongolia, People's Democratic Republic of Yemen, Poland, Rumania, Senegal, Syria, Tunisia, Turkey, USSR, United Arab Emirates, Vietnam, Yugoslavia Republic of Korea and Democratic People's Republic of Korea.

Auroville

While the cultural co-operation activities rest mainly with the Department of Culture, union Ministry of Education and Culture, international cultural co-operation programmes are also executed through the Indian National Commission for Co-operation with UNESCO. A programme now under way with assistance from the commission is the 'Auroville' project of Sri Aurobindo Society, Pondicherry, which aims at bringing together the values and ideals of different cultures.

Indian Council for Cultural Relations

The Indian Council for Cultural Relations, New Delhi, established in 1950, strives to promote and strengthen cultural relations and mutual understanding between India and other countries. The Council has regional offices at Bangalore, Bombay, Calcutta, Chandigarh, Madras and Varanasi and cultural centres in Suva (Fiji), Georgetown (Guyana) and Paramaribo (Surnam).

The main functions of the Council are reciprocal development of studies in Indian and foreign universities, publications in English and foreign languages on different aspects of Indian culture, exchange of cultural material with libraries and museums abroad, exchange of cultural delegations, scholars and artistes and organisation of lectures, seminars and conferences. The Council promotes exchange visits between scholars, artistes, men of eminence in the field of art and culture; organisation of international seminars, symposia and conferences; establishment of chairs and Centres of Indian Studies abroad; looking after the welfare of foreign students in India and publication of periodicals in English, Arabic, Spanish, French and Hindi.

The Council administers the Jawaharlal Nehru Award for the Promotion of Peace and International Understanding, instituted by the union government in 1964. Receipients of the Award so far are : U Thant, the late Dr. Martin Luther King, Khan Abdul Ghaffar Khan, Yehudi Menuhin, Mother Teresa, Dr. Kenneth D. Kaunda, Josip Broz Tito, Andre Malraux, Julius Nyerere, Raul Prebisch, Jonas Salk, Giuseppe Tucci, Tulsi Meherji Shrestha, Nichidatsu Fuji and Nelson Mandela.

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

7 SCIENTIFIC RESEARCH

Scientific research in India is organised under four broad heads : (i) research organised under various institutions in different ministries of the central government, (ii) research carried out by various institutions under the state governments, (iii) research undertaken by universities and (iv) research programme of the private sector.

There are about 150 research laboratories under the administrative control of major scientific departments carrying out research in different areas. In addition, there are a large number of scientific institutions under various central ministries carying out research programmes of practical application in their respective fields, such as, railways, telecommunications, energy, etc. The state governments supplement the efforts of the central government in areas which are of prime importance to them, *viz.*, agriculture, animal husbandry, etc. The University Grants Commission has set up a Science Research Council to promote research in universities. Till December 1979, there were 558 industrial establishments including the public sector whose in-house research and development units were registered with the Department of Science and Technology. A number of incentives are being offered by the central government to accelerate R&D in all the industries.

The expenditure on resarch and development and related scientific and technological activities has increased from Rs 4.7 crores in 1950-51 to approximately Rs 690 crores in 1976-77 and is expected to be of the order of Rs 600 crores in 1978-80.

Agricultural research with its long history in India, has essentially been carried out by the Indian Council of Agricultural Research in the Department of Agricultural Research and Education with the help of 24 institutions and 21 agricultural universities. The Indian Council of Medical Research, started in 1911, has under its control 10 permanent institutions doing studies not only in diseases and treatment but also in various other related branches of fundamental research.

SCIENCE POLICY

The Government of India's science policy is guided by a resolution adopted by Parliament as early as March 1958. One of the main objectives of this resolution is to secure for the people of the country the benefits from the acquisition of scientific knowledge and its application. The resolution also sets out some other aims like encouraging individual initiative for the acquisition and dissemination of knowledge as well as the discovery of new knowledge, fostering programmes to train scientific and technical personnel to fulfil the needs in the fields of science and education, agriculture, industry and defence and ensuring an adequate supply of scientists and recognising their work. All this would help in fostering and sustaining the cultivation of science and scientific research in all its aspects, namely, basic, applied and educational.

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

EXPENDITURE Tables 7.1 and 7.2 give an idea of basic expenditure on scientific research and development sector-wise and organisation-wise.

TABLE 7.1 Expenditure on Scientific Research and Development

(*Rs crores*)

	1974-75	1975-76	1976-77	1977-78 (Estimate)	1978-79 (Estimate)	1979-80 (Estimate)
Central government[1]	258·92	323·70	361·49	397·82	468·92	558·17
State governments[2]	28·65	31·94	37·14	42·71	49·11	56·47
Private sector[2]	36·46	42·35	49·50	56·92	65·45	75·26
TOTAL	324·04	397·99	448·13	497·45	583·48	689·90

[1]About 76 per cent of the total expenditure on S&T under the central government for 1976-77 was incurred by the major scientific agencies. For the years 1977-78, 1978-79 and 1979-80, the figures for these agencies are available and are included in the Table. The expenditure for other agencies has been estimated on the basis of the trend in 1976-77.

[2]For the state governments and the private sector, the expenditure for 1977-78, 1978-79 and 1979-80 has been estimated by applying 15 per cent rate of growth.

TABLE 7.2 S&T Budget of Major Organisations

(*Rs crores*)

Name of the Agency	1977-78[1]	1978-79 (R.E.)	1979-80 (B.E.)
1. Department of Atomic Energy	57·06	60·99	68·59
2. Department of Space	38·39	53·55	74·10
3. Department of Science and Technology	39·91	47·37	55·87
4. Council of Scientifie and Industrial Research	46·67	44·38	51·16
5. Defence Research and Development Organisation	51·45	67·11[1]	69·44
6. Indian Council of Medical Research	4·49	5·39	8·00
7. Indian Council of Agricultural Research	·18	68·93[2]	87·81[2]
8. Department of Electronics	5·17	8·66	9·24
TOTAL	302.32	356·38	424·21

[1]Actual.
[2]Includes education and training.
R.E.=Revised estimates.
B.E.=Budget estimates.

NCST The National Committee on Science and Technology (NCST) is the apex body to advise the government on formulation and implementation of science and technology policy.

A comprehensive science and technology plan, as an integral part of the socio-economic Fifth Five Year Plan, was prepared by NCST, for the first time in 1973. In addition to the programmes of the scientific agencies, such as, atomic energy, space, electronics, agriculture, priority was given to areas like natural resources, marine resources, fuel and power, heavy engineering, machine tools, mining, steel and metallurgy, chemical industries, recycling of wastes, housing, urbanisation and construction technology, health and family welfare and research support, extension and education. Projects identified in these areas are under implementation through various scientific and technical institutions.

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

The National Committee on Science and Technology has also finalised a technology policy statement for the consideration of the government.

DST

The Department of Science and Technology (DST) was set up in 1971. Since then it has been continuously engaged in promoting research and development in frontier and emerging areas of science and technology. Some of the special programmes under these are : new energy sources, instruments development, newer fibres and composites, biological, agricultural and atmospheric science projects, oceanographic research, all India coordinated projects in a few emerging areas, etc.

NES

The New Energy Sources (NES) Programme is aimed at generating relevant research and development activity towards the utilisation of solar energy, wind and bio-mass. A broad-based co-ordinated programme has emerged embodying an integrated approach with research, design, development and demonstration activities in several major areas of application, and involving the participation of research institutions, industry, user agencies and extension agencies. Capabilities have been built up in the area of solar energy in (a) solar cells, (b) solar thermal devices and systems, particularly for water and air heating, refrigeration, and (c) bio-conversion. In the area of solar photovoltaics, CEL has commenced indigenous fabrication at bench-scale of single crystal silicon solar cells and panels, up to the level of 10 kw per year.

OSTA

In order to plan, co-ordinate and develop indigenous capability in oceanographic research, government set up an Ocean Science and Technology Agency (OSTA) in DST in 1976. The Prime Minister is the chairman of OSTA Governing Board. Steps have been taken to acquire and build a multi-disciplinary oceanographic research vessel with assistance from the Federal Republic of Germany (FRG). Consultants have been appointed in FRG for design and supervision during the construction of the vessel. The standing committee of OSTA has divided the broad spectrum of oceonographic research into seven national programmes. Expert panels are preparing detailed projects and their mode of execution, which would ultimately be dovetailed into the cruise programme of the national research facilities. A separate marine research and development fund has been set up under OSTA to support R&D in this area.

The DST also co-ordinates science and technology activity in the country including planning and provision of grants to research institutions; holds ministerial responsibilities of such autonomous bodies as the Council of Scientific and Industrial Research (CSIR) and the National Research Development Corporation (NRDC) and looks after bilateral agreements on science and technology with other countries and has been acting as a focal point for collaboration with a number of UN agencies in the field of science and technology. Scientific Attaches have been appointed at the Indian embassies in Washington, Moscow, Tokyo and London to establish better liaison in science and technology.

The Department of Science and Technology has taken several measures for promotion of indigenous technology through 'in-house research and development' activities by industries. These include liberal import facilities, preferential treatment in licensing, liberal fiscal incentives for scientific research, weighted deduction of expenditure for scientific re-

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

search and provision of increased investment allowance for making use of indigenous technology. Till the end of 1979, 558 'in-house research and development' units in industry held valid recognition accorded by Department of Science and Technology, of which 56 are in the public sector and more than 500 in the private sector. These have contributed in not only absorbing technology, imported in their industry but have also stimulated export of their know-how to other countries.

Seventeen state research, development and design committees have been se up jointly by the DST and the Department of Industrial Development. These committees which started functioning in 1973 to help in solving the problems of the small industries, are now serving the medium sector industries also. In order to give more attention to regional entrepreneurs, several state research, development and design committees have also been set up, region-wise to provide extended services to entrepreneurs.

These committees have diversified their services rendered to the small scale entrepreneurs by organising technical symposia and seminars. In certain states, these committees are also giving developmental assistance to the regional entrepreneurs by bringing them in touch with regional technical institutions and national laboratories in these areas.

With a view to promoting and strengthening the science and technology base in the country and for facilitating the work of scientists on sophisticated equipments, the DST has established regional sophisticated instrumentation centres at the Indian Institute of Technology, Madras; Central Drug Research Institute, Lucknow; and Bose Institute, Calcutta.

NRSA

The National Remote Sensing Agency (NRSA) is an autonomous body under DST set up for carrying out surveys of various natural resources using remote sensing techniques. Satellite imagery, multi-spectral scanner data from aerial flying and aerial photography are made use of for such surveys. The laboratory premises at NRSA are locate dat Hyderabad and the research flight facility with four aircraft (for high, medium and low altitude flying), fitted with various sensors, is located at Bangalore. The laboratory at Hyderabad is equipped with an interactive digital image analysis system, a printer-plotter system, an additive colour viewer and a modern photo processing laboratory. The Indian Photo-interpretation Institute at Dehra Dun, which is now under NRSA, provides training facilities in photo-interpretation and remote sensing techniques. A Landsat earth station for direct reception of data from Landsat series statellite launched by NASA, USA, has been commissioned near Hyderabad. This station provides real time earth resources data from Landsat-3 satellite and high resolution meteorological data from TIROS-N and NOAA-6 satellites launched by NOAA, USA. The NRSA has undertaken and successfully completed several resources survey projects for users. Till March 1979, an investment of about Rs 13.00 crores had been made for setting up basic facilities and for the period 1979-83, a further investment of Rs 14.00 crores is envisaged for enhancing the facilities.

NISSAT

The DST set up a National Information System for Science and Technology (NISSAT) in 1977 with the main objective of interlinking and co-ordinating the various information sources, systems and services into an effective decentralised information network involving standar-

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

dised and mutually competitive systems for collection, storage, processing and dissemination of information. The four subject/product/mission oriented sectoral information centres catering to the four different sectors of science and technology, viz., leather (CLRI, Madras), machine-tools (CMTI, Bangalore), food (CFTRI, Mysore), drugs and pharmaceuticals (CDRI, Lucknow) and the regional information centre (Calcutta) have already begun their regular activities with full zeal. Various surveys, like in the sectors of chemicals, textiles, etc., have been carried out with a view to ascertaining the requirements of the potential users of information in the respective sectors.

To keep the scientists and technologists in the country informed of the state-of-the-art in the field of information science, a quarterly publication entitled "NISSAT Newsletter" is being brought out regularly.

CEL

The Central Electronics Limited (CEL) is a public sector enterprise set up for the manufacture of sophisticated ferrites, ceramics and other electronic components based fully on indigenous know-how. Its factory located at Sahibabad (U.P.) has started commercial production. The company has also undertaken a number of R and D projects based on indigenous know-how in the field of electronics, solar photo-voltaic cells and electronic instrumentation for possible commercial production. The approved outlay during the Fifth Plan was Rs 5.00 crores which is expected to go up to Rs 7.00 crores by 1984-85.

National Surveys and other Institutions

The DST has administrative responsibility for the Survey of India, Dehra Dun; the National Atlas Thematic and Mapping Organisation, Calcutta; the National Museum for Natural History, New Delhi; the Botanical Survey of India, Calcutta, which has in Calcutta its four main centres, namely, the Indian Botanical Garden, the Central National Herbarium, the Industrial Section of the Indian Museum and the Central Botanical Laboratory and eight regional circles at Allahabad, Coimbatore, Dehra Dun, Jodhpur, Pune, Port Blair, Shillong and Gangtok. The Zoological Survey of India, Calcutta, has regional stations at Dehra Dun, Jabalpur, Jodhpur, Madras, Patna, Port Blair, Pune, Shillong, Solan and Hyderabad.

There are several research institutions receiving financial assistance from DST. These are : Indian Association for the Cultivation of Science, Calcutta; Bose Institute, Calcutta; Raman Research Institute, Bangalore; Birbal Sahni Institute for Palaeobotany, Lucknow; Wadia Institute of Himalayan Geology, Dehra Dun; Maharashtra Association for the Cultivation of Science, Pune; and Padmaja Naidu Himalayan Zoological Park, Darjeeling. Grants are given to the Indian National Science Academy, New Delhi and the Indian National Science Congress Association, Calcutta. The DST has also set up a Science and Engineering Research Council (SERC) to support research programmes in frontier areas and entirely new scientific disciplines emerging at the interface of basic and applied science.

NCEPC

The National Committee on Environmental Planning and Co-ordination (NCEPC) was constituted by the Government of India in 1972 to identify, investigate and propose solutions for the problems of improving the human environment in the context of growth and distribution of population and economic development. For accomplishing these goals,

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

the NCEPC is to review, formulate and promote policies and programmes covering development, physical planning, legislation, administrative procedures, education and public information and research. Under the terms of reference assigned to the NCEPC, the major functions include promotion of environmental ecological research, appraisal of development projects from environmental impact considerations, preparing guidelines for incorporating environmental safeguards in development, planning, recommending policy for environmental management and coordinatin gactivities in the field of environmental planning, legislation, research and training with international agenices. The NCEPC also takes initiative for the promotion of environmental awareness at all levels of society and is a focal point for exchange of expertise and information in the fields related to human environment.

The NCEPC has constituted sub-committees for dealing with the special problems relating to natural resources management, industry and environment, environment education, human settlements and rural environment. Project proposals for research and development as well as action programmes for demonstrating environmental management measures are considered by the funding bodies, namely, the Environmental Research Committee (ERC) and the Indian National Man and Biosphere Research Committee (MAB) constituted by the Department of Science and Technology. The NCEPC reviews the activities of state environmental committees constituted in most of the states and union territories at the behest of the NCEPC. The NCEPC has also taken a lead for identifying biosphere reserves in the country.

NRDC

The National Research Development Corporation of India (NRDC), New Delhi, a public sector undertaking of the central government set up in 1953, acts as a link between research and industry. It is also entrusted with the task of promoting inventive talents in the country. In 1978-79, it signed 101 licensing agreements for releasing various processes to industry. Over 2,000 licensing agreements have so far been signed. The value of goods produced from processes licensed by NRDC is estimated to be over Rs 40.00 crores. The activities in the application of indigenous know-how in collaboration with industry have been intensified during recent years.

The NRDC is implementing 15 pilot projects in the Socialist Republic of Burma, costing approximately Rs 2.5 crores. Efforts are being made for the horizontal transfer of technology. It has also succeeded in contracting for export of technology from India.

The Corporation continued its activities in promoting new inventions, and giving awards to inventors. A publication in two volumes "Appropriate Technologies" has been brought out, containing 107 technologies in chemical and allied industries and 73 technologies in engineering industry.

ATOMIC ENERGY

The Atomic Energy Commission, set up in August 1948, is responsible for all atomic energy activities in the country. The executive agency for implementing the atomic energy programme is the Department of Atomic Energy which was set up in August 1954.

Research and development work on the application of atomic energy is done at the Bhabha Atomic Research Centre (BARC) at Trombay, near Bombay. The Centre is the largest single scientific establishment in the country. At present, it houses four research reactors : APSARA,

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

a one-megawatt swimming pool type reactor; CIRUS, a 40 mw reactor; ZERLINA, a zero energy expcriment reactor; and PURNIMA, a zero energy fast reactor, and some of the most advanced laboratories and workshops in the world. R-5, a 100 mw thermal research reactor, is under construction at Trombay.

Over 350 radioactive products and labelled compounds are produced at BARC and are supplied to some 500 institutions in India and abroad. Radio-isotopes are finding use within the country in varied applications ranging from industrial radiography to the diagnosis and treatment of diseases. Important applications of radiations are being tried out in disinfesting foodgrains, developing high-yielding, disease-resistant mutants of, among others, rice, wheat, groundnut, jute, sugarcane and mustard; preserving perishable foodstuffs and sterilising medical products. Some of the radioactive products and associated equipment produced at the BARC are also being exported. A commercial radiation sterilisation plant at Trombay, called ISOMED, provides sterilisation service to the medical products industry in the country. The Radiation Medicine Centre at Bombay handles diagnostic and therapantic application of radio-isotopes.

The Variable Energy Cyclotron, built at Calcutta by BARC, is a national facility for advanced work in nuclear physics, and for controlled direct irradiation of biological and agricultural products.

The Gauridibanur Seismic Station of BARC ,near Bangalore, helps in the detection and identification of underground nuclear explosions and also facilitates seismic research.

A High Altitude Research Laboratory of BARC at Srinagar provides facilities for high altitude research to all scientific institutions and universities in the country. There is also a Nuclear Research Centre at Srinagar.

Besides the nuclear sciences, BARC undertakes research and development work in a wide range of other fields including metallurgy vacuum technology, laser, plama physics, electronics, agriculture, bilogy and medicine. It has developed a number of products and processes during the last 30 years and passed on the technical know-how relating to them to the industry. The BARC also conducts a country-wide personnel monitoring service for evaluating radiation exposure of workers in institutions using radiation sources, besides carrying out radiologcal protection surveys.

In addition to R and D, the Atomic Energy Programme covers a wide range of independent activities undertaken by units under the Department of Atomic Energy situated in different parts of the country. Survey, prospecting and developing work relating to uranium, therium, beryllium and columbium-tantahum is carried out by the Atomic Minerals Division, with its headquarters at Hyderabad. The Indian Rare Earths Ltd. extracts rare earth, minerals and thorium from the beach sands of South India. The Uranium Corporation of India Ltd. mines and concentrates uranium at Jaduguda in Bihar. A Nuclear Fuel Complex at Hyderabad fabricates fuel elements for nuclear power reactors. The Complex also prepares special materials needed by the electronics industry. Manufacture of electronic instruments and equipment for nuclear as well as non-nuclear uses including commercial TV sets and computers is undertaken at the Electronics Corporation of India Ltd., Hyderabad.

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

NUCLEAR POWER

The most important peaceful application of atomic energy is generation of power. Nuclear power made its debut in the country with the commissioning of the 420 mw Tarapur Atomic Power Station in Maharashtra in 1969.

The Power Project Engineering Division of the Department undertakes the construction and operation of nuclear power stations. Presently, it is constructing Unit II of the Rajasthan Atomic Power Station, the Madras Atomic Power Station at Kalpakkam in Tamil Nadu, and the Narora Atomic Power Station at Narora in Uttar Pradesh.

The power reactors being constructed at present use heavy water as moderator. To produce this rare commodity within the country, a small heavy water plant is functioning at Nangal. Besides this plant, there are four heavy water plants at Vadodra, Kota, Talcher and Tuticorin.

Work on advanced reactor concepts, such as the Fast Breeder Reactor, is being done at the Reactor Research Centre, Kalpakkam, where a Fast Breeder Test Reactor is under construction.

Another area in which India has advanced is the technology of underground nuclear explosions. On 18 May 1974, India successfully conducted its first underground nuclear experiment at Pokhran in Rajasthan.

There is an advanced training programme at the Bhabha Atomic Research Centre where annually around 150 graduate engineers and scientists are given special training in nuclear science and technology to enable them to prepare for positions in the various atomic energy establishments in the country. India's nuclear facilities have been made available for training and research work to scientists from a number of developing countries.

SPACE RESEARCH

The primary aims of the Indian space programme are the application of space science and technology to further national developmental objectives in mass communication and education *via* satellites, the survey and management of natural resources through remote sensing technology from space platforms and the development of space technology will the maximum degree of self-reliance.

The organisation entrusted with the realisation of these aims is the Space Commission backed by the Department of Space, with Bangalore being the headquarters of both. The chairman of the Space Commission is also Secretary to Government of India in the Department of Space.

ISRO

The Indian Space Research Organisation (ISRO) is responsible for the planning, execution and management of space research activities and space applications programmes of the Department of Space. ISRO, which also has its headquarters in Bangalore, provides rockets and laboratory facilities to scientists belonging to different organisations in India for conducting selected space science experiments.

The activities of ISRO in various areas of space technology have resulted in techniques and products which find use in other areas of national importance. A flight telemetry system developed for rockets is being adapted for aircraft flight-testing by Hindustan Aeronautics Limited (HAL). Pressure and thrust transducers developed for satellites and rockets are being used in a variety of industrial applications. Telemetry techniques used for rocket systems are being applied to solve

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

problems relating to turbine blade vibrations. Technologies for low-cost television equipment developed as part of the Satellite Instructional Television Experiment (SITE) have been transferred to industry for commercial exploitation. Fibre-reinforced plastics technologies developed for rocket and satellite applications have evoked considerable interest in industry for a variety of applications. Polyols developed for solid propellants are finding commercial applications in a variety of flexible and rigid polyurethane foam products and elastomers.

Major Establishments

The major establishments of ISRO are described below :

VSSC

The Vikram Sarabhai Space Centre (VSSC), Trivandrum, is the main research and development centre for space technology. This Centre is active in developing sounding rockets and satellite launch vehicles, scientific and technological payloads, ground-based and vehicle-borne instrumentation and has production facilities for propellants, rocket hardware and electronics. VSSC has developed the *Menaka, Rohini* and the Indian *Centaure* series of sounding rockets for meteorological and scientific investigations of the upper atmosphere. A Satellite Launch Vehicle, called SLV-3, is a four-stage solid propellant rocket which launched on 18 July 1980 an indigenous satellite, called *Rohini,* into a near earth orbit. The first experimental flight in August 1979 was partially unsuccessful but the second has been completely successful.

The R & D groups in VSSC are for avionics, aeronautics, chemicals and materials, composites, propulsion and system reliability.

ISAC

The ISRO Satellite Centre (ISAC) at Bangalore is responsible for the design, fabrication and integration of spacecraft and the development of satellite technology. The first Indian satellite, *Aryabhata,* named after the famous ancient Indian astronomer and mathematician, was designed and fabricated at this Centre. The 360-kg satellite was launched in April 1975 into a near-circular orbit of 600 km at an inclination of 51° to the equator from a Soviet cosmodrome. *Aryabhata* is still functioning and has survived in orbit well beyond its design lifetime of six months.

The launching of *Aryabhata* marked India's acquisition of indigenous capability in satellite technology—to design and fabricate a spaceworthy system, evaluate its performance in orbit, conduct a series of complex on-board operations and to set up the necessary receiving, transmitting and tracking systems besides establishing the infrastructure for satellite and sub-systems fabrication.

The second Indian satellite, *Bhaskara,* primarily meant for earth observation experiments, was launched on 7 June 1979. The satellite carries microwave radiometers and TV cameras fabricated by the Space Applications Centre to obtain data of relevance in the areas of hydrology, forestry, oceanography and meterology. *Bhaskara* was also launched by a Soviet launcher. The radiometers are providing useful ocean and land-surface temperature data.

Efforts are continuing to circumvent a malfunction in the TV power system and switch on the TV cameras.

ISAC has fabricated *Rohini* Satellite (RS-1) which was launched by

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

SLV-3. The primary mission goal of RS-1 is to evaluate the performance of the fourth stage of SLV-3, its dynamic characteristics, the trajectory of the vehicle and the orbital characteristics of the satellite.

ISAC is also developing a 657.5 kg three-axis stabilised geostationary experimental communications satellite, called *Apple*. Its communications payload is being built by the Space Applications Centre, Ahmedabad. Important sub-systems such as the apogee boost motor, C-band antenna, momentum wheel and solar array drive are under development at VSSC. *Apple* will be launched by the Ariane vehicle of the European Space Agency in 1980. *Apple* is a forerunner of future Indian operational communications satellites and represents a significant advance in the complexity of indigenous satellite technology.

SHAR Centre

The SHAR Centre at Sriharikota island, in Andhra Pradesh, has been developed as a testing and launching range for sounding rockets and satellite launch vehicles. To meet the propellant requirements of large launch vehicles, a solid propellant plant, with an annual production capacity of 250 tonnes, has also been set up at SHAR. Comprehensive test facilities for conducting various ground tests of rocket motors and rocket/satellite sub-systems exist in SHAR. Equipped with tracking, telemetry and telecommand facilities, SHAR serves as the prime mission control centre for all launch vehicles and spacecraft launched by India. It is also the nerve centre of the ISRO tracking network (ISTRAC).

The SHAR also operates and maintains the Thumba Equatorial Rocket Launching Station (TERLS) in Kerala, recognised by the United Nations as an international range for sounding rocket experiments. The geomagnetic equator runs close to Thumba. Since November 1963, when the range became operational, more than 7,000 sounding rockets of different countries have been launched for meteorological, ionospheric, aeronomic and astronomical studies. Scientists from Bulgaria, France, Federal Republic of Germany, Japan, UK, USA and USSR have participated, in cooperation with their Indian counterparts, in many of these experiments.

SAC

The Space Applications Centre (SAC) at Ahmedabad is engaged in the planning and execution of the space applications projects of ISRO. Its objective is to develop the practical applications of space science and technology primarily in communications and remote sensing. SAC has undertaken projects in telecommunications and television broadcasting and reception *via* satellites, use of remote sensing techniques to survey natural and renewable earth resources and studies in meteorology and geodesy from space platforms. SAC is developing the expertise and instrumentation required in these application areas.

During 1975-76, it successfully conducted the unique Satellite Instructional Television Experiment (SITE) with the help of NASA's ATS-6 satellite, taking television programmes to the heart of rural India for the first time. Specially augmented community TV sets were installed in 2,400 villages in Rajasthan, Bihar, Orissa, Madhya Pradesh, Karnataka and Andhra Pradesh. These TV sets received instructional programmes directly from the satellite. The Kheda district in Gujarat has India's first rural TV transmitter which also relayed the SITE programmes.

Following the success of SITE, to provide continuity, the govern-

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

ment decided to provide a terrestrial rural TV service and a chain of transmitters were installed at Gulbarga, Hyderabad, Jaipur, Muzaffarpur, Raipur and Sambalpur. Commissioned in 1977-78, these cover a total of 9,560 villages, including 1,014 villages covered earlier by SITE.

Under an agreement between ISRO and the Symphonie Council, one of the two transponders aboard the Franco-German symphonie satellite was made available for Indian experiments in satellite telecommunications for two years beginning from June 1977. Known as the Satellite Telecommunications Experiments Project (STEP), this project was executed jointly by ISRO and the Posts and Telegraphs Department. Under STEP, experiments in remote area communications using transportable terminals, radio-networking, emergency communications, digital communications, multiple-access, integration of satellite circuits into terrestrial network and multiple audio-video transmissions were conducted. The project was mainly aimed at providing a system test of geosychronous communications satellite and sharpening India's expertise in the design, development, fabrication and operation of telecommunication systems linked to a geostationary satellite.

The ground network for STEP consisted of the Ahmedabad, Delhi and Madras earth stations, a Transportable Remote Area Communication Terminal (TRACT) and an Emergency Communication Terminal (ECT).

One important area of activity of SAC is the remote sensing of natural and renewable resources. ISRO and the Indian Council of Agricultural Research (ICAR) conducted, during 1974-75, a joint experiment called the 'Agricultural Resources Inventory and Survey Experiment' (ARISE) employing remote sensing techniques to assess crops and land-use pattern. Aerial flights using Hasselblad cameras were conducted over Anantapur and Patiala districts. The results indicated that the accuracy and extent of information regarding agricultural features, land-use pattern, etc., which remote sensing data can yield, is higher than the currently compiled and published statistical data. This has important implications for planning and management at the micro and macro levels.

So far, ten remote sensing campaigns have been conducted by ISRO covering two per cent of the country's land area. Most of them used air-borne multi-spectral scanners for studying aspects of agriculture and landscape features in Sriharikota island, Jaipur, Bangalore, and the districts of Anantapur, Patiala and Panchmahals district in Gujarat.

MONEX

The ISRO participated in the Monsoon Experiment (MONEX) conducted during 1979. A regional component of an international study called "Global Atmospheric Research Programme" (GARP), MONEX was conducted jointly by the World Meteorological Organisation (WMO) and the International Council of Scientific Unions (ICSU). The India Meteorological Department (IMD) was the main executing agency of this project in India. ISRO's contribution to the project comprised collection of data using rockets, air-borne thermal infra-red scanners and reception of data from satellites.

INSAT

In furtherance of the objective of the Indian space programme to apply space technology for practical applications in the country, the government approved the establishment of the Indian National Satellite

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

SLV-3. The primary mission goal of RS-1 is to evaluate the performance of the fourth stage of SLV-3, its dynamic characteristics, the trajectory of the vehicle and the orbital characteristics of the satellite.

ISAC is also developing a 657.5 kg three-axis stabilised geostationary experimental communications satellite, called *Apple*. Its communications payload is being built by the Space Applications Centre, Ahmedabad. Important sub-systems such as the apogee boost motor, C-band antenna, momentum wheel and solar array drive are under development at VSSC. *Apple* will be launched by the Ariane vehicle of the European Space Agency in 1980. *Apple* is a forerunner of future Indian operational communications satellites and represents a significant advance in the complexity of indigenous satellite technology.

SHAR Centre

The SHAR Centre at Sriharikota island, in Andhra Pradesh, has been developed as a testing and launching range for sounding rockets and satellite launch vehicles. To meet the propellant requirements of large launch vehicles, a solid propellant plant, with an annual production capacity of 250 tonnes, has also been set up at SHAR. Comprehensive test facilities for conducting various ground tests of rocket motors and rocket/satellite sub-systems exist in SHAR. Equipped with tracking, telemetry and telecommand facilities, SHAR serves as the prime mission control centre for all launch vehicles and spacecraft launched by India. It is also the nerve centre of the ISRO tracking network (ISTRAC).

The SHAR also operates and maintains the Thumba Equatorial Rocket Launching Station (TERLS) in Kerala, recognised by the United Nations as an international range for sounding rocket experiments. The geomagnetic equator runs close to Thumba. Since November 1963, when the range became operational, more than 7,000 sounding rockets of different countries have been launched for meteorological, ionospheric, aeronomic and astronomical studies. Scientists from Bulgaria, France, Federal Republic of Germany, Japan, UK, USA and USSR have participated, in cooperation with their Indian counterparts, in many of these experiments.

SAC

The Space Applications Centre (SAC) at Ahmedabad is engaged in the planning and execution of the space applications projects of ISRO. Its objective is to develop the practical applications of space science and technology primarily in communications and remote sensing. SAC has undertaken projects in telecommunications and television broadcasting and reception *via* satellites, use of remote sensing techniques to survey natural and renewable earth resources and studies in meteorology and geodesy from space platforms. SAC is developing the expertise and instrumentation required in these application areas.

During 1975-76, it successfully conducted the unique Satellite Instructional Television Experiment (SITE) with the help of NASA's ATS-6 satellite, taking television programmes to the heart of rural India for the first time. Specially augmented community TV sets were installed in 2,400 villages in Rajasthan, Bihar, Orissa, Madhya Pradesh, Karnataka and Andhra Pradesh. These TV sets received instructional programmes directly from the satellite. The Kheda district in Gujarat has India's first rural TV transmitter which also relayed the SITE programmes.

Following the success of SITE, to provide continuity, the govern-

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

ment decided to provide a terrestrial rural TV service and a chain of transmitters were installed at Gulbarga, Hyderabad, Jaipur, Muzaffarpur, Raipur and Sambalpur. Commissioned in 1977-78, these cover a total of 9,560 villages, including 1,014 villages covered earlier by SITE.

Under an agreement between ISRO and the Symphonie Council, one of the two transponders aboard the Franco-German symphonie satellite was made available for Indian experiments in satellite telecommunications for two years beginning from June 1977. Known as the Satellite Telecommunications Experiments Project (STEP), this project was executed jointly by ISRO and the Posts and Telegraphs Department. Under STEP, experiments in remote area communications using transportable terminals, radio-networking, emergency communications, digital communications, multiple-access, integration of satellite circuits into terrestrial network and multiple audio-video transmissions were conducted. The project was mainly aimed at providing a system test of geosychronous communications satellite and sharpening India's expertise in the design, development, fabrication and operation of telecommunication systems linked to a geostationary satellite.

The ground network for STEP consisted of the Ahmedabad, Delhi and Madras earth stations, a Transportable Remote Area Communication Terminal (TRACT) and an Emergency Communication Terminal (ECT).

One important area of activity of SAC is the remote sensing of natural and renewable resources. ISRO and the Indian Council of Agricultural Research (ICAR) conducted, during 1974-75, a joint experiment called the 'Agricultural Resources Inventory and Survey Experiment' (ARISE) employing remote sensing techniques to assess crops and land-use pattern. Aerial flights using Hasselblad cameras were conducted over Anantapur and Patiala districts. The results indicated that the accuracy and extent of information regarding agricultural features, land-use pattern, etc., which remote sensing data can yield, is higher than the currently compiled and published statistical data. This has important implications for planning and management at the micro and macro levels.

So far, ten remote sensing campaigns have been conducted by ISRO covering two per cent of the country's land area. Most of them used air-borne multi-spectral scanners for studying aspects of agriculture and landscape features in Sriharikota island, Jaipur, Bangalore, and the districts of Anantapur, Patiala and Panchmahals district in Gujarat.

MONEX

The ISRO participated in the Monsoon Experiment (MONEX) conducted during 1979. A regional component of an international study called "Global Atmospheric Research Programme" (GARP), MONEX was conducted jointly by the World Meteorological Organisation (WMO) and the International Council of Scientific Unions (ICSU). The India Meteorological Department (IMD) was the main executing agency of this project in India. ISRO's contribution to the project comprised collection of data using rockets, air-borne thermal infra-red scanners and reception of data from satellites.

INSAT

In furtherance of the objective of the Indian space programme to apply space technology for practical applications in the country, the government approved the establishment of the Indian National Satellite

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

(INSAT) system by 1981. INSAT is a multi-purpose geostationary satellite system for telecommunication and meteorology and also has capability for nationwide direct TV broadcast to community TV receivers in rural areas. It is a unique system which cuts across the traditional jurisdictional boundaries of ministries and departments of the government. The establishment and operation of the INSAT system will involve the departments of Space, Communications and Meteorology as well as the Ministry of Information and Broadcasting.

Each of the two first generation INSAT (INSAT-1) satellites will combine capability for long-distance telephony continuous meteorological earth observations in the visible and infra-red bands, relay of meteorological data from unattended data platforms, disaster warning, direct TV broadcasting and programme distribution. When established in 1981, the INSAT system will significantly enhance quantitatively as well as qualitatively the telecommunications, meteorological and mass communications capabilities of the country.

The Ford Aerospace Communication Corporation, California, USA, has been awarded a contract for the fabrication of the INSAT-1 spacecraft and associated equipment for the Master Control Facility (MCF), coming up near Hassan, Karnataka.

STARS The Satellite Tracking and Ranging Station (STARS) was inaugurated on 23 January 1977 at Kavalur in Tamil Nadu. It has been started in collaboration with the USSR Academy of Sciences. In addition to the tracking cameras, there is also a ranging laser at the station. It will thus be possible to determine orbits of our own satellites accurately and the data collected will be useful for geodetic purposes.

PRL The Physical Research Laboratory at Ahmedabad conducts basic research in space sciences for understanding the structure and dynamics of the earth's upper atmosphere, the solar-terrestrial relationship, astrophysical problems, etc.

ELECTRONICS The Electronics Commission is the nodal agency responsible for the healthy growth of the electronics industry in India. It is assisted by the Department of Electronics for executive duties. The responsibilities of the Electronics Commission/Department of Electronics are discharged through a number of activities like the information, planning and analysis, coordination through promotional regulatory work, technology development and direct execution of programmes.

To build up a sound indigenous technology base, the Electronics Commission has set up Technology Development Council (TDC) and National Radar Council (NRC) for identifying, implementing and monitoring the technology development projects in various research institutes, public sector undertakings, universities and IITs. The activities of the NRC are in the field of radars, sonars and navigational aids. The TDC and NRC have already approved 145 and 30 projects respectively for financial support covering various sectors of electronics like materials, components, instruments, controls, computers, radars, etc. Out of these, about 40 projects have been completed and the technology developed has been or is being transferred to appropriate production agencies. Most of the projects are in the high technology area and are mostly import-substitution activities. The Department of Electronics has undertaken development of a few computer based

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

electronic systems for the Ministry of Defence.

The production of electronic equipment and components has grown very rapidly over the past few years. During 1978, the total electronics production was of the value of Rs 590.5 crores. The public sector units like Bharat Electronics Ltd., Indian Telephone Industries Ltd., Electronics Corporation of India Ltd., Instrumentation Ltd., Hindustan Teleprinters Ltd., Hindustan Aeronautics Ltd., Central Electronics Ltd., etc. manufacture a wide variety of products contributing for more than 50 per cent of the total electronics production. The export of electronic goods during 1978 was of the value of Rs 39.6 crores. The production base in the Santa Cruz Electronics Export Processing Zone (SEEPZ) (for 100 per cent export) has been further widened. The exports from the Zone have increased from Rs 4 crores in 1977 to Rs 5.6 crores in 1978. The Kandla Free Trade Zone (for 100 per cent export) has also started functioning.

The Department of Electronics has made substantial efforts for developing indigenous computer capability for hardware as well as software. The major producer of indigenous computers is Electronics Corporation of India Limited, Hyderabad, a public sector undertaking. It has already produced and installed about 150 computer systems of various types, such as TDC-12, TDC-312, TDC-316 and Micro-78. A few units in the private sector have successfully developed and marketed dedicated microprocessor based systems for financial, inventory and other applications. Research work is also in progress for use of Indian languages in computers. To meet the computing needs of various regions, Department of Electronics has been establishing regional computer centres. The regional computer centre at Calcutta has already been in operation and is used by over 70 users. The regional computer centre for the northern region has been set up at Chandigarh. Another centre has been set up at Pune. The National Centre for Software Development and Computing Techniques, Bombay, has been making steady progress towards its objectives. The National Informatics Centre (NIC), set up to provide a computer network infrastructure for enabling the development of interactive computerized data bases for various ministries/departments and related organisations of the Government of India, has made considerable progress. It has already developed several information systems for various government ministries/ departments, and installed six computer terminals through which they can directly have an access to the Maxi computer being installed at NIC.

The Industrial Electronics Promotion Programme aiming at identifiying the needs and promoting the use of control, instrumentation and industrial electronics in major industrial sectors has been progressing. The Special Microwave Products Unit has been developing and supplying several critical and high technology microwave devices and sub-systems for professional and strategic uses. The Beryllium Metal and Copper Beryllium Alloy Plant is being set up at BARC, Bombay.

The Department of Electronics has three public sector undertakings under its administrative control. The Electronics Trade and Technology Development Corporation (ETTDC), New Delhi, has been fostering the trade with foreign countries. It has enlarged its technology development activities regarding making Indian electronic products export-worthy and developing import substitutes. It assists in technology transfer for the technology development projects of Depart-

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

ment of Electronics. It is also rendering consultancy services in the field of electronics in India and abroad. The Computer Maintenance Corporation (CMC), Hyderabad, set up to develop an indigenous base for computer support services, has been providing maintenance service to IBM computers numbering about 800. It has also been providing maintenance service to several ICL and Roborron Computers, while service to other computer makes such as DEC, CDC, Cii-HB, ITEL and EMI is going to be provided. The Semiconductor Complex is being established at SAS Nagar in Mohali (near Chandigarh). The complex will primarily manufacture large scale integrated circuits (LSI) products used in data systems like calculators and computers, instrumentation, telecommunications and consumer electronics.

In order to encourage the growth of the electronics industry uniformly throughout the country, Electronics Commission has been encouraging the setting up of functional electronics estates. Already a few states like Gujarat, Kerala, Uttar Pradesh, Punjab, West Bengal, Bihar, Karnataka, Haryana and Maharashtra have set up state-owned electronics development corporations for the manufacture of a wide variety of electronic items. The Electronics Commission/Department of Electronics has been providing financial and technical assistance for the setting up of electronics test and development centres in various states and union territories aimed at providing integrated standardization, testing, reliability promotions, and offering continuing feedback for overall quality improvement in the country. So far, 18 such centres have been set up for providing these services to the small and medium scale units.

As the nodal agency of government in the field of electronics as a whole, the Department plays an important advisory, coordinating, integrating and promotional role through a number of direct and indirect means. The Electronics Commission has been setting up technical panels to assess the country's requirements of electronics products in the specific areas, and to draw up a work programme including technology development, creating of industrial capacity, manpower training, provision of special infrastructural facilities, etc., to support the production base. The Department of Electronics is actively involved in various satellite programmes of the Department of Space. It is represented on several high level boards/committees and technical groups constituted by the Ministry of Defence and its associated agencies for the implementation of specific programmes in the defence electronics. Technical studies are undertaken on a continuing basis in the Department to explore alternatives for meeting the defence requirements on the basis of maximum self-reliance.

CSIR

The Council of Scientific and Industrial Research (CSIR) with its network of laboratories and research institutions is a major instrument of scientific and industrial research under state auspices and supports research in universities and other centres of learning.

The Council administers the "Scientists Pool", introductd in 1958, to provide temporary placement to well qualified Indian scientists, engineers and medical personnel returning from abroad, and later extended to highly qualified Indian scientists who had not been abroad. Temporary placements were offered to 675 persons during 1979-80, selected in consultation with UPSC, bringing the total to 13,318. The CSIR also maintains a register of scientists and technical personnel

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

in the country.

The Council has set up six polytechnology transfer centres, one each at Ahmedabad, Bangalore, Bhopal, Hyderabad, Patna and Trivandrum. The setting up of polytechnology transfer centres at Bombay, Calcutta, Lucknow and Shillong has been approved. Proposals have also been received from the states of Himachal Pradesh, Rajasthan and Punjab. These polytechnology transfer centres are working as state-level centres for extending technological assistance to industries, particularly in the medium and small scale sector and serve as a link of communication between the generators and users of technology.

The role of CSIR is primarily to demonstrate that with the application of science and technology, better results can be obtained. The Council is associated with the work relating to natural resources survey, roads, buildings, public utility services like sanitation, water supply, waste disposal and industries.

The Council has a scheme to facilitate CSIR scientists, technologists and engineers to set up industries based on CSIR know-how. Eight industries based on CSIR technologies have been set up.

During the year, 42 processes were referred to the National Research Development Corporation (NRDC). Seventy-seven processes were released to industry for commercialisation, out of which 19 were released for the first time. Production was reported to have started on 30 processes.

The CSIR spends about Rs 3 crores every year in financing research schemes and awarding research fellowships/associateships to universities and other academic institutions. In addition, grants are given to superannuated active research scientists to continue research in the fields of specialization even after retirement. Funds are also provided to scientific societies of all-India character for organising seminars/symposia on topics of relevance to CSIR, and for popularisation of science to Indian language journals.

The Council instituted an Award in 1957 in the memory of its first Director and architect, late Dr Shanti Swarup Bhatnagar. The award is made each year for outstanding contribution in science including engineering and technology. Five or more prizes, each of value of Rs 20,000, are usually awarded annually in the following disciplines; Physical Sciences, Chemical Sciences, Biological Sciences, Medical Sciences and other Sciences.

The CSIR publishes a popular science monthly "Science Reporter".

National Laboratories

The CSIR laboratories and industrial research associations working under the auspices of CSIR are grouped into six distinct disciplines.

Physical and Earth Sciences

The national laboratories coming under the physical and earth sciences group are : the National Physical Laboratory, New Delhi (estd. 1950), which has designed, developed and operated Sodar—an instrument for locating and measuring thermal and velocity in homogeneities in atmosphere; the Central Electronics Engineering Research Institute, Pilani (estd. 1953; extension centres at Madras and New Delhi), which has developed 100 mw and 500 mw citizen band transreceivers (walkie-talkies); the Central Scientific Instruments Organisation, Chandigarh (estd. 1959; service and maintenance centres at Bombay, Calcutta, Madras, Lucknow, Hyderabad and New Delhi), which has developed digital IC tester, altimeter and optical thickness gauge; the

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

National Geophysical Research Institute, Hyderabad (estd. 1961), which has successfully completed the deep seismic sounding profile along Kavali-Udipi cross-section with Soviet collaboration; and the National Institute of Oceanography, Panaji (estd. 1966; regional centres at Bombay and Cochin), which is engaged in the studies of the seas around India with a view to making judicious use of their resources.

Chemical Sciences

The national laboratories under the chemical sciences group are : the National Chemical Laboratory, Pune (estd. 1950), which has developed processes based on which the commercial production of chloromethanes, phenthoate and monoethylaniline has been undertaken; the Central Electrochemical Research Institute, Karaikudi (estd. 1953; field stations at Madras and Mandapam), which has developed process know-how for sintered photo-conductive cadmium selenide cells, weston standard cell and aniline sulphate; the Central Salt and Marine Chemicals Research Institute, Bhavnagar (estd. 1954; field sttaion at Mandapam), which has developed reverse osmosis and electrodialysis plants for desalination of brackish waters; the Regional Research Laboratory, Hyderabad (taken over in 1956), which has developed the process know-how for the production of silicon carbide and glass-lining of chemical process equipment— mild steel and cast iron reaction vessels; the Regional Research Laboratory, Jorhat (estd. 1959; experimental farms at Imphal, Mokokchung and Shillong), which has developed technology for the production of carbon black from high-volatile coals of Assam; and the Indian Institute of Petroleum, Dehra Dun (ested. 1959; field stations at Jawahar Nagar and New Delhi), which has evaluated crude oils from Bombay High region and from Assam (Galeki) and Iraq (Basrah) in order to provide basic data for processing these crudes in Indian refineries.

Biological Sciences

The national laboratories under the biological sciences group are : the Central Food Technological Research Institute, Mysore (estd. 1950; experimental stations at Anantharajupet, Bombay, Lucknow, Ludhiana, Mangalore, Nagpur and Trichur), which has developed process know-how based on which a commercial unit for filling Durofume (mixture of ethylene dibromide and methyl bromide used for fumigation of food materials) into cans manufactured in the country has been set up at Mysore; the Central Drug Research Institute, Lucknow (estd. 1951), which has standardized processes for L-dopa, an imported drug used in the treatment of parkisonism, and in domethasin, an imported anti-inflammatory drug; the Central Leather Research Institute, Madras (estd. 1953, extension centres at Bombay, Calcutta, Jullundur, Kanpur and Rajkot), which has developed a pancreatin like enzyme product, using pancreas of cow, sheep, buffalo and goat, for efficient removal of gelatin coatings from cellulose acetate photographic films; the National Botanical Research Institute, Lucknow (taken over in 1953, research station at Banthra), which has developed know-how for mass propagation through tissue culture of *Discorea floribunda*, a commercial source of diosgenin; the Indian Institute of Experimental Medicine, Calcutta (taken over in 1956) which has developed a process for the fractionation of plasma proteins at room temperature; the Regional Research Laboratory, Jammu (taken over in 1957; field stations at Chatha, Palampur, Srinagar and Varinag), which

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

has developed know-how for the production of progesterone from diosgenin; the Central Institute of Medicinal and Aromatic Plants, Lucknow (estd. 1959; two zonal centres at Bangalore and Jammu-Tawi and four commercial centres at Bangalore, Haldwani, Jammu and Srinagar), which is providing aromatic and medicinal plant products to the pharmaceutical and perfumery industries; the Industrial Toxicology Research Centre, Lucknow (estd. 1965), which studies the harmful effects of industrial toxins for developing preventive measures; and Tea Research Association (estd. 1965), which supports scientific research and advisory work for the betterment of the tea industry in north-east India.

Engineering Sciences

The national laboratories under the engineering group are: the Central Fuel Research Institute, Dhanbad (estd. 1950) which carries out physical and chemical surveys of Indian coals through seven stations at Bilaspur, Jammu, Jealgora, Jorhat, Nagpur, Nankan and Raniganj; the Central Glass & Ceramic Research Institute, Calcutta (estd. 1950); which has developed process know-how based on which optical glass is being commercially produced at the Bharat Ophthalmic Glass Ltd., as a result of which the entire requirement of the country for optical glass can be met from indigenous sources; the National Metallurgical Laboratory, Jamshedpur (estd. 1950; regional stations at Ahmedabad, Batala, Howrah and Madras), whose technology for sponge iron has been utilised in India's first sponge iron plant (capacity, 25-30 thousand tonnes/annum) at Vijayawada; the Central Road Research Institute, New Delhi (estd. 1952), which has developed a high-amplitude screed-board vibrator for compaction of concrete; the Central Building Research Institute, Roorkee (estd. 1953; field station at Calcutta and extension cells at Ahmedabad and Bhopal), whose construction techniques are being applied in various states for the construction of low-cost houses; the Central Mechanical Engineering Research Institute, Durgapur (estd. 1958; R&D centres at Ludhiana, Madras and Pune), which has developed a completely indigenous high-speed single-stage centrifugal air compressor and tip ice maker; the Central Mining Research Station, Dhanbad (estd. 1956), whose work includes mine safety, design of equipment used in mining and development of mining machinery; the National Environmental Engineering Research Institute, Nagpur (estd. 1958; zonal laboratories at Ahmedabad, Bombay, Calcutta, Delhi, Hyderabad, Jaipur, Kanpur and Madras) which carries out research in sanitation, disposal of sewage and industrial wastes, industrial hygiene and pollution; the National Aeronautical Laboratory, Bangalore (estd. 1959), which has designed and fabricated an acoustic testing facility for conducting vibroacoustic tests on scaled structural models of aerospace vehicles in high-intensity noise environment; the Structural Engineering Research Centre, Roorkee (estd. 1965; regional centre at Madras), which does research in specialized designs and structural problems connected with buildings, bridges and other structures; the Regional Research Laboratory, Bhubaneswar (estd. 1964), which made a study of the fifth five-year plan programme and development potentialities of Orissa and identified areas where this regional laboratory and other CSIR laboratories could render technical assistance; the Indian Plywood Industries Research Institute, Bangalore (estd. 1962; field stations at Calcutta and Tinsukia), which has popularised the use of defatted groundnut cake in

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

plywood adhesive and as a result of which considerable savings in petroleum-based synthetic resins have been effected; the Cement Research Institute of India, New Delhi (estd. 1966) which has given a lead in the utilization of industrial wastes, especially fly ash and has prepared feasibility report for establishing mini cement plants in the north-eastern region of the country; the Automotive Research Association of India, Pune, which is concerned with the testing, development, design and research facilities for the automotive and ancillary industries.

Achievements

The work done by various institutions of CISR has benefited both large and small scale industries. The achievements of some of the institutions are mentioned below :

In collaboration with the Central Fuel Research Institute, Dhanbad, the Central Mechanical Engineering Research Institute, Durgapur, has developed a paddy husk combustor for the Food Corporation of India. The Tea Research Association, Jorhat, has helped Assam Tea Corporation, West Bengal Tea Development Corporation and Tea Trading Corporation of India in increasing the productivity of their tea gardens in terms of field and quality of tea. The Central Electronics Engineering Research Institute (CEERI), Pilani, has developed electronic central instrumentation for two of the most critical stages of sugar industry, *viz.*, juice clarification and pan boiling. The Mechanical Engineering Research and Development Organisation of CMERI at Ludhiana has designed and developed a semi-automatic hand wool knitting machine. The Central Food Technological Research Institute, Mysore, has developed a simple process for making dehydrated tamarind powder. The Regional Research Laboratory, Jammu, has devised a solar drier for drying chillies.

The Central Mining Research Station, Dhanbad, has developed a dust extractor which collects and conveniently disposes of more than 99 per cent of the total dust produced during drilling and reduces 85 per cent of the airborne respirable dust at the drilling face. The Central Scientific Instruments Organisation, Chandigarh, has developed an X-Ray image intensifier closed circuit television system.

CECON

The Civil Engineering Consultancy Service (CECON) was set up by the CSIR in 1975. Its constituent units are : the Central Building Research Institute, Roorkee; the Structural Engineering Research Centre, Roorkee; the National Environmental Engineering Research Institute, Nagpur; the Central Road Research Institute, New Delhi; the Cement Research Institute of India, New Delhi and the National Botanical Gardens, Lucknow.

The CECON, which functions from the premises of Central Road Research Institute, New Delhi, provides international consultancy services in civil engineering, particularly to developing countries.

Information Sciences

The Publications and Information Directorate (PID), New Delhi (estd. 1951), and the Indian National Scientific Documentation Centre (INSDOC), New Delhi (estd. 1952), of the CSIR are engaged in dissemination of scientific and technical information. The PID brings out encyclopaedic volumes on raw material resources and industrial products under the general title "Wealth and India" and ten scientific research periodicals besides other publications on scientific and tech-

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

nical information. It has launched a new bi-monthly journal "Medicinal and Aromatic Plants Abstracts". The INSDOC provides documentation and translation services and maintains a National Science Library. It also publishes Indian Science Abstracts and Annals of Library Science and Documentation and compiles a series of catalogues which list the holdings of specialised libraries and establishments. During the year 1975, INSDOC brought out two volumes of 'Regional Union Catalogue of Scientific Serials' covering Madras and Hyderabad.

The CSIR also maintains two science museums. The Birla Industrial and Technological Museum, Calcutta, has eleven galleries depicting a chronological history of science and technology through working models, animated exhibits, diagrams and illustrated charts. The Visvesvaraya Industrial and Technological Museum (VITM), Bangalore, arrranges workshops, mobile exhibitions, demonstration lectures, science fairs and seminars to depict advancement in science and technology, and has galleries on electrotechnic, motive power, timber and paper and popular science.

Fibre Technology

Six associations conduct research in fibre technology. They are : Ahmedabad Textile Industry's Research Association, Ahmedabad (estd. 1947), which has designed a flash economizer unit for the recovery of heat from boiler blowdown; the Bombay Textile Research Association, Bombay (estd. 1954), which has developed a device for checking the runout of gears, and yarn tension meter; the South India Textile Research Association, Coimbatore (estd. 1951), which has developed know-how based on which the commercial production of 'two-for-one' twister and 'Sitralized' spindle tape, chemically treated for increased wear life of cellulosics, has been undertaken; the Silk and Art Silk Mills' Research Association, Bombay (estd. 1950), which has developed ultra-violet absorbers for prevention of photodegradation of polyamide fibres; the Indian Jute Industries' Research Association, Calcutta (estd. 1966), which has developed a more economic jute bag without any polyethylene lamination for packing both phosphatic and nitrogenous fertilizers and has also developed attractive yarns from blends of jute/rayon and jute/wool; and the Wool Research Association, Bombay (estd. 1963), which has developed a technique of computerised colour match prediction.

The Central Glass and Ceramic Research Institute, Calcutta, has developed a technology for the production of fibre glass in small scale sector.

AGRICULTURAL RESEARCH

The Department of Agricultural Research and Education, set up in 1973, is responsible for coordinating research and educational activities in the field of agriculture, animal husbandry and fisheries in India. Besides, it helps to bring about inter-institutional and intra-institutional collaboration both at national and international levels, among agencies like the International Atomic Energy Agency, the Food and Agricultural Organisation of the UN, etc., engaged in the same and allied fields. It also gives administrative support to the Ministry of Agriculture in matters relating to agriculture, animal husbandry, etc. The Department of Agricultural Research and Education provides government linkage to the Indian Council of Agricultural Research (ICAR). The Secretary to the Government of India in

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

the Department of Agricultural Research and Education is also the Director-General of the ICAR.

The Indian Council of Agricultural Research, set up in 1929, is the apex body for formulating plans and coordinating agricultural, animal husbandry and fisheries education and research and their application at field level through the medium of the extension agencies under the central and state governments as also through the agricultural universities. The ICAR functions through a network of 33 well-equipped and well-staffed research institutes, 5 Project Directorates and 54 All India Coordinated Research Projects and a number of other institutes. A National Academy for Agricultural Research Management has been established at Hyderabad to train probationers of the Agricultural Research Service. To attract meritorious students to agriculture, the ICAR offers a large number of senior and junior fellowships and scholarships at graduate and post-graduate levels.

The Agricultural Research Service has been functioning since October 1975, under the auspices of the ICAR and through the specially constituted Agricultural Scientists Recruitment Board. This service facilitates maximum utilisation of the available manpower and enables the desired mobility of scientists from one position to another as may be required in the interests of agricultural research and education.

The ICAR's recent work concerning the research needs of remote and difficult areas such as Meghalaya, Nagaland, Andaman and Nicobar Islands, Goa and some important national coordinated projects on rice, wheat, pulses, oilseeds, cotton, dryland agriculture, inland and marine fisheries needs special mention. These are aimed at bridging the existing gap in agricultural research and education in these regions and crops.

MEDICAL RESEARCH

Medical research in India is mainly done through the Indian Council of Medical Research (ICMR), New Delhi, through a network of research institutes and centres covering a wide spectrum. The ICMR, set up in 1911, has 15 permanent research institutions and centres, namely, National Institute of Nutrition, Hyderabad; National Institute of Virology, Pune; Tuberculosis Research Centre, Madras; National Institute of Cholera and Enteric Diseases, Calcutta; Indian Registry of Pathology, New Delhi; National Institute of Occupational Health, Ahmedabad; Institute for Research in Reproduction, Bombay; Central JALMA Institute for Leprosy, Agra; Blood Group Reference Centre, Bombay; Vector Control Research Centre, Pondicherry; Malaria Research Centre, Delhi; Institute for Research in Medical Statistics, New Delhi; Laboratory Animal Information Service, Hyderabad; Food and Drug Toxicology Centre, Hyderabad; and Cytology Research Centre, New Delhi.

There are two statutory bodies to conduct research in various branches of medical sciences. These are the All India Institute of Medical Sciences, New Delhi, and the Post-Graduate Institute of Medical Education and Research, Chandigarh. There is also an All India Institute of Speech and Hearing at Mysore which has been functioning under the Ministry of Health and Family Welfare since 1965. Clinical facilities are available at all these institutes.

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

Study of Diseases and Treatment

Some of the institutions doing work in particular branches of medicine and treatment are the Indian Cancer Research Centre, Bombay; Cancer Institute, Madras; and the Chittaranjan Cancer Research Centre, Calcutta, besides the cancer wing being developed at the Institute Rotary Cancer Hospital at the All-India Institute of Medical Sciences, New Delhi, as a regional institution for cancer; the National Tuberculosis Institute, Bangalore and Vallabhbhai Patel Chest Institute, Delhi, where research in chest ailments including tuberculosis is done. Central Leprosy Teaching and Research Institute, Chingleput, which trains medical and para-medical personnel, treats leprosy patients and is recognised as a WHO regional centre for certain investigations in leprosy. The National Institute of Communicable Diseases, Delhi, (previously known as the Malaria Institute of India, established in 1909) with its seven branches is engaged in research training and rendering service in communicable diseases. It also plans, guides and evaluates the National Filaria Control Programme which has been designated as a WHO reference centre for some communicable diseases.

The All India Institute of Hygiene and Public Health, Calcutta, set up in 1932, undertakes training and research in the field of public health, family planning, nutrition and allied matters. The Rural Health Unit and Training Centre, Singur, and the Urban Health Centre, Chelta, are attached to this institute. Biological and chemical assays of drugs are carried out at the Central Drugs Laboratory, Calcutta, which also maintains a herbarium and gives technical advice to drug manufacturers.

Micro-biology and Related Studies

The Central Research Institute, Kasauli, is the central drug laboratory for all biological products. It has been entrusted with the responsibility of evolving national standards and distributing both the national and international standards for standardising biological products manufactured in the country. The Institute functions as the national centre for giving expert advice both to the government and public on rabies, yellow fever, snake-bite, cholera, typhoid, whooping cough, tetanus and diphtheria. It carries out both basic and applied research in the prevention of communicable diseases. The Institute is the largest and comprehensive producer of biological products in the country. Besides carrying out diagnostic tests, it provides antigens, anti-sera and technical advice regarding diagnostic procedures for the public health and hospital laboratories. It has started preliminary work for the production of measles vaccine and has also prepared a project report for the production of Japanese encephalitis vaccines. The Pasteur Institute, Coonoor, does research in rabies, influenza, other respiratory virus infections, diseases caused by intestinal viruses like polio, coxsackie and ECHO group and bacterial diseases like enteric fevers and syphilis. It is the main centre for research on rabies and influenza in the country. It serves as the international reference centre of WHO on rabies and National Centre for Work on Influenza. The King Institute of Preventive Medicine, Guindy, Madras, gives post-graduate training in micro-biology, makes supplies of prophylactic vaccines, freeze-dried small-pox vaccine, anti-tetanus sera, tetanus toxoid, blood products and intravenous and special solutions of various kinds. It also undertakes public health bacteriological investigations. The Haffkine Institute, Bombay, established

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

in 1896, does research in bacteriology, experimental medicine, chemotherapy, pharmacology, pathophysiology, biochemistry, immunohaematology, immunology and virology related to communicable and other diseases. It also undertakes drugs analysis and biological standardisation. It trains scientists for post-graduate degree and provides public health laboratory services by way of diagnosis of diseases and epidemiological investigations. It manufactures some bacterial and viral vaccines, anti-toxins and other biologicals including human plasma products.

DEFENCE RESEARCH

The Defence Research Development Organisation (DRDO) was established in 1958 by amalgamating some of the then existing Technical Development Establishments with the Defence Science Organisation. It has since undergone a phased programme of build up and expansion in various fields of defence science and technology and has a wide network of well-equipped establishments/ laboratories including a few field units. The scope of its activities covers a wide span of disciplines, *viz.*, armaments (small arms, guns, ammunition, instruments, ballistics); explosives and propellants; rockets and missiles; electronics (including radars, communication); aeronautics (gas turbine engines, avionics system); naval science and technology (physical, chemical, metallurgical aspects and underwater weapons); structural and civil engineering; vehicles (including armoured fighting vehicles); general stores, materials technology and applied sciences (metals, ceramics and chemicals).

The tasks undertaken and progressed in DRDO establishments are of two types; Staff Projects taken up against specific Service QRs (Qualitative Requirements) and RD Projects taken up with a view to build up expertise in the contemporary and futuristic technologies of relevance to defence.

In addition to defence organisations, close liaison is maintained with the civil academic and research institutions in the country with a view to exploit the expertise and potential available in the national organisations for defence work. A number of projects are farmed out to various institutions under the grants-in-aid schemes. Whenever the processes/techniques developed by DRDO have civil applications in addition to defence, these are released to private industry for commercial exploitation.

DEPARTMENTAL RESEARCH

A number of other government departments are responsible for certain branches of research. Some of them are described below.

Geology

The Geological Survey of India (GSI) with headquarters at Calcutta was established in 1851 largely for prospecting coal in eastern India. Now, GSI is the principal agency responsible for preparation of geological, geochemical and geophysical maps of the country including offshore areas, for the exploration and assessment of the mineral resources in the country, for the execution of the studies pertaining to the environmental geology and geotechnical services for assisting various environmental developments and engineering projects and for all earth sciences activities that have direct and indirect impact in the field of mineral, industry, power, irrigation, agriculture and management of environment. Some other major branches of re-

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

search carried by the Department include petrology, palaeontology, field technique and geochemistry. The results of the studies are disseminated through maps and publications brought out by GSI which functions through 6 regional offices, 32 circle offices and a number of specialised divisions.

Hydraulic and Power Research

The Central Water and Power Research Station at Khadakvasala near Pune, the premier hydraulic research station in India, is recognised by the Economic and Social Commission for Asia and the Pacific (ESCAP) as its regional laboratory. There are 15 other hydraulic research stations in the country and also three Soil Mechanics and Material Research Stations dealing with the problems connected with river valley projects development. The Central Board of Irrigation and Power supervises and co-ordinates the work done by three research stations as well as the work done by the various power research stations on power stations and transmission systems.

Meteorology

The India Meteorological Department, organised on an all India basis in 1875, is the national agency for providing service in the field of meteorology. Meteorological data are collected from over fourteen hundred observatories of different types and processed by the department. The department, alongwith the Indian Institute of Tropical Meteorology (IITM), Pune, conducts fundamental and applied research in different fields of meteorology, weather forecasting, meteorological instrumentation, radar meteorology, seismology, agricultural meteorology, hydrometeorology, satellite meteorology and air pollution. The IITM has also been conducting cloud seeding experiments for producing rain artificially. The Indian Institute of Astrophysics (IIA), Bangalore, the Indian Institute of Geomagnetism (IIG), Bombay and the IITM, Pune, which were formerly a part of the India Meteorological Department, have been made autonomous institutes since 1971. The IIA conducts research in solar and stellar physics, radio astronomy, cosmic radiation, etc. The IIG records magnetic observations and conducts research in geomagnetism.

BROADCASTING

The research department of All India Radio investigates problems of both sound and TV broadcasting. The functions of the department are broadly shared by four sections—propagation and technical services, acoustics and audio engineering, research and development, and prototype and production. Different problems related to radiowave propagation from longwave centimeter waves including satellite broadcasting are investigated in the propagation section. The department has a well-equipped acoustic laboratory for conducting measurements on microphones and loudspeakers, absorption properties of various acoustic materials and noise insulation. The research and development section works on the development of equipment with a view to bringing about self-reliance and self-sufficiency. The prototype section undertakes production of some specialised type of equipment developed by the research and development unit, not available off-the-shelf and required in limited quantities.

During 1979, the department conducted investigations in LF band for the development of a method for short-term predictions of

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

ionospheric disturbances and to study the morphology of lower ionosphere. In addition, investigations were carried out in MF band for polarisation coupling loss and sea-gain effects: in HF band for a suitable field strength prediction method; in VHF band for field strength prediction curves and in 12 GHz to evaluate the rainfall attenuation margin.

Items of equipments developed in 1979 include automatic ionospheric recorder for ionospheric research, low cost AM/FM receiver, FM modulation monitor for measuring the percentage modulation of FM and the deviation of FM transmitter frequency, an improved version of FM receiver for studio-transmitter programme link and a second improved model of digital controlled electronics switching console.

Technical know-how of amplitude modulation monitor, FM receiver and transmitter and digital master clock system, developed in the department, were transferred to commercial organisations.

Telecommunication

In its endeavour to keep pace with modern technological growth in the field of electronics and communications the world over, the Posts and Telegraphs Department had set up in 1956 a Telecommunication Research Centre (TRC), which is located at New Delhi. The research centre is engaged primarily with the introduction of the technology and up-dating and improving the existing technology and equipment in the P and T network. It provides guidance to the planning and operational branches of the P and T Department.

The highlights of TRC's activities have been field trial of stored data programme, electronic exchange and successful completion of satellite telecommunication experiments with hardware designed in TRC. No less important has been the up-dating of the cross-bar equipment and development of digital transmission, switching and data communication equipment. It has also made improvements in line, radio communication and microwave equipment, as also in the switching field including setting up trunk automatic exchanges and subscriber and operator trunk dially facilities, and traffic recording methods.

The TRC has contributed substantially in the planning of the domestic and international satellite communication system. It gives advice in the field of electronics and communications to the various sister organisations of the Government of India.

Anthropology

The work of the Anthropological Survey of India, with headquarters at Calcutta, includes social, psychological, economic, linguistic, physical and genetic investigations. It has its regional offices at Dehra Dun, Mysore, Nagpur, Port Blair, Shillong and Udaipur and a sub-regional office at Jagdalpur. The ASI has a fellowship programme to encourage anthropological research in India and a collaborative research programme with universities and other research institutions.

Aviation

The Department of Civil Aviation has a Directorate of Research and Development concerned with design and air-worthiness of civil aircraft and equipment, aircraft performance testing, development of indigenous aircraft materials, design and manufacture of prototype of gliders and training aircraft, selection of suitable aircraft types for

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

civil operations and safety in air operations.

The Institute of Aviation Medicine, Bangalore, set up in 1957 by the IAF, deals with human problems relating to aircrew and flight safety and carries out research and medical evaluation.

The Research, Designs and Standards Organisation, Lucknow, the Indian Roads Congress, New Delhi, and the Forest Research Institute, Dehra Dun, conduct research with a bearing on railways, roads and timber, respectively.

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

8 HEALTH

The Constitution of India lays down that "the State shall regard the raising of the level of nutrition and the standard of living of its people and the improvement of public health as among its primary duties." To give effect to this directive, health has been given due priority.

Public Health is primarily the responsibility of the state governments. The central government, however, guides, sponsors and supports major schemes for improving the health of the people. The Ministry of Health and Family Welfare co-ordinates the work of the state governments. The Central Council of Health advises the ministry on policies and programmes in all their aspects.

OBJECTIVES

The primary objective of the Fifth Plan was to provide minimum public health and medical care facilities integrated with family welfare and nutrition for vulnerable groups of the population, *viz.*, children, pregnant women and lactating mothers and the poorer sections. The accent is on (i) increasing the accessibility of health services to rural, hilly and tribal areas, (ii) correcting the regional imbalance in health care delivery systems, (iii) further development of referal services by removing deficiencies in district and sub-divisional hospitals and providing specialist services in rural areas, (iv) intensification of the control and eradication of communicable diseases, and (v) qualitative improvement in the education and training of health personnel.

PHYSICAL TARGETS AND ACHIEVEMENTS

Planned development of over two and a half decades has resulted in vastly improved health facilities. The number of doctors and hospital beds has increased by more than two and a half times and that of nurses by more than five times. The number of medical colleges has increased from 30 before the First Plan to 106 at present. In rural areas, there are about 5,400 primary health centres and more than 39,000 sub-centres at present whereas none existed before 1951. Malaria, TB and Cholera which used to take a heavy toll of life have been controlled to varying degrees. No case of plague has been reported in the country since 1967. Smallpox which was a dreaded disease, has been eradicated. The general death rate has come down from 27.4 per thousand in 1949-50 to 15.0 per thousand in 1976 and life expectancy at birth has increased from 32 years to 52 years.

To check the rate of growth of population, the family welfare programme was launched in 1952 as a national programme. In June 1977, the government in consultation with the states reviewed the national population policy declared in April 1976 and formulated a new approach so as to attain the demographic goal of reducing the birth rate to 30 per thousand by 1982-83.

The revised Minimum Needs Programme along with the training of multi-purpose health workers and a more vigorous pursuit of the programme to eradicate or control communicable diseases form the core of health care. The backward and tribal areas are now receiving preference in the implementation of the health programmes.

A number of training centres for different categories of health workers, *i.e.*, nurses, sanitary inspectors, para-medical workers, non-medical supervisors, physiotherapists, etc., exist now. The plan of action

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

on the report of "Group on Medical Education and Support Manpower" for a three-tier reconstruction of the entire health care system, has been worked out. The scheme of involvement of community level workers, *i.e.,* teachers, postmasters and gram-sevaks, after a short training, for delivery of nutrition, health and family welfare services as a package service is under implementation.

PATTERN OF INVESTMENT

Table 8.1 gives the pattern of investment in different plan periods.

(Rs crores)

Plan period		Total plan investment	Health outlay	Allocation to health as percentage of total allocation
First Plan	(1951-56)	1,960·00	65·20	3·30
Second Plan	(1956-61)	4,672·00	140·80	3·00
Third Plan	(1961-66)	8,576·00	225·90	2·60
Annual Plans	*(1966-69)*	6,625·40	140·20	2·10
	(1966-67)	2,164·50	44·30	2.00
	(1967-68)	2,084·90	43·10	2·10
	(1968-69)	2,376·00	52·30	2·20
Fourth Plan	(1969-74)	15,778·80	335·50	2·10
Fifth Plan	*(1974-78)*			
	(1974-75)	5,038·60	85·20	1·70
	(1975-76)	6,496·10	118·10	1·80
	(1976-77)	8,070·50	140·20	1·70
	(1977-78) (outlay)	9,965·40	184·90	1·90
Sixth Plan	(1978-79) (outlay)	11,650·00	281·50	2·40
	(1979-80) (outlay)	12,601·00	268·20	2·10

ERADICATION AND CONTROL OF COMMUNICABLE DISEASES

To eradicate and control major communicable diseases a number of national programmes are in operation, *e.g.,* National Smallpox Eradication Programme, National Malaria Eradication Programme and National Leprosy Control Programme besides the control programmes for TB, filaria, trachoma, cholera and sexually transmitted diseases.

"Zero" incidence in Smallpox was achieved on 5 July 1975 and since then it is being successfully maintained. In order to combat the recent rise in the incidence of malaria and growing mosquito menace, the revised strategy of selective containment has been devised and has been put into operation since 1976-77.

Malaria

Malaria took a toll of 7.5 lakh lives in the post-independence period. A Malaria Control Programme was, therefore, launched in 1953. In 1958, it was converted into National Malaria Eradication Programme. It succeeded in reducing the incidence from 7.5 crores in the post-independence period to only 1.00 lakh in 1965. Further, there were no deaths due to malaria in 1965. But the situation thereafter deteriorated year after year. The incidence of malaria increased from 1.48 lakh in 1966 to 64.7 lakhs in 1976. This was due partly to vector mosquitoes having developed resistance to DDT and partly to ineffective supervisory services. The government has taken suitable measures to control malaria effectively.

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

Training of personnel in methods of malaria eradication is imparted at the National Institute of Communicable Diseases, Delhi, and the regional office of health and family welfare at Bangalore, Bhubaneswar, Hyderabad, Lucknow, Shillong and Vadodara.

Smallpox

Smallpox was another great killer before 1947. So the National Smallpox Eradication Programme was launched in 1962 with emphasis on intensive primary vaccination campaign and revaccination of vulnerable groups of population. Consequently, the incidence of smallpox declined continuously. To eliminate the smallpox foci, an intensive smallpox eradication campaign was launched from the middle of 1973 with emphasis on active search for smallpox cases followed by containment of detected outbreaks. As a result, the incidence of smallpox was brought down to zero in July 1975. Surveillance activities were, however, continued. The country was declared to have eradicated smallpox by the International Assessment Commission on 23 April 1977.

Leprosy

The National Leprosy Control Programme has been operating since 1955. The number of people exposed to leprosy risk is about 37.2 crores, of which 32.4 crores have been covered so far. The estimated leprosy cases are about 32 lakhs, of which about 8 lakhs are infectious. About 25.2 lakh cases have been recorded and are being given treatment through 382 leprosy control units, 6,590 SET (survey, education and treatment) centres, 430 urban leprosy centres and 190 temporary hospitalisation wards (each of 20 beds), 231 leprosy homes and hospitals having over 32,800 beds. Seventy-one reconstructive surgery units are also working for prevention and correction of deformities of hands, feet and face.

Forty national and eight international voluntary organizations are also participating in the programme with their men, money and material.

Training of medical and non-medical personnel is conducted through 41 (32 government and 9 voluntary) training centres and Central Teaching and Research Institute, Chingleput, (Tamil Nadu), which also conducts research. The Japanese Leprosy Mission for Asia, (JALMA), Agra, taken over and renamed Central Leprosy Research Institute, is now working under the Indian Council of Medical Research. One regional leprosy research institute has been opened at Raipur.

The leprosy advisory committee has been reconstituted as national leprosy advisory committee as a high power body for the National Leprosy Control Programme and to formulate new policies relating to the programme. A provision of Rs 232 lakhs was provided in the revised budget for 1979-80 under the Central Health Sector.

Filaria

The National Filaria Control Programme has been in operation since 1955. It is estimated that 23.6 crore people are exposed to the risk of filariasis with 1.4 crores having manifestation of the disease and 1.8 crores with filarial parasites in their blood.

Activities under the programme are at present confined only to anti-larval operations in urban areas where 156 filaria control units provide protection to 2.3 crore persons. Fortysix filaria clinics are also functioning in rural areas. Besides, 12 Headquarters Bureaux are also functioning at the state level. So far, only 181 out of 290

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

districts in the endemic states have been surveyed. During the Fifth Plan, 32 survey units were to be set up for delimitation of the problem in the remaining 130 districts. Of these 23 have been established.

Training in filariology is given at the three Regional Filaria Training and Research Centres at Calicut (Kerala), Rajahmundry (Andhra Pradesh) and Varanasi (Uttar Pradesh).

Tuberculosis

Nearly 90 out of every one lakh people die of TB every year in the post-independence period. The BCG Vaccination Programme was started in 1949. About 25.40 crore persons had been tuberculin tested and 24.75 crore persons vaccinated till September 1979. Since 1973, dried vaccine is being produced for supply all over the country. Estimates indicate that there are about 90 lakh radiologically active TB cases, of which nearly 22 lakhs are infectious. Over 600 clinics have been set up, of which 318 have been upgraded as district TB centres to undertake district-wise TB control programme. Nearly 42,700 TB beds are available for in-patient treatment. Seventeen centres provide training facilities to the medical and para-medical personnel in different parts of the country. The National TB Institute, Bangalore, conducts re-orientation courses for medical and para-medical personnel from different states for the implementation of the district TB programme. The Institute also carries out operational research in the field of tuberculosis. Steps are being taken to increase the production of BCG vaccine to meet increased requirements.

The voluntary TB organisations including the Tuberculosis Association of India, which is the largest voluntary organisation, also assist in combating the disease. There are more than 200 state and district TB associations all over the country.

Sexually Transmitted Diseases

At present, 237 sexually transmitted disease clinics are functioning in the country. Training facilities in VD control are available at the training centre, Safdarjang Hospital, New Delhi, and the Institute of Venereology, Government General Hospital, Madras. A second VDRL Antigen production unit at Calcutta and a mobile VD unit at Delhi have also started functioning.

A survey-*cum*-detection team has been established at the National Institute of Communicable Diseases, Delhi, to determine the epidemiological aspects of syphilis and gonorrhoea in the high risk group, *i.e.*, college students, technical students, industrial skilled and non-skilled labour, etc. In addition, the team also provides therapeutic services to the patients detected in the survey.

Trachoma

The National Trachoma Control Programme, which was started in 1963, continues to be in operation in Andhra Pradesh, Assam, Bihar, Gujarat, Haryana, Himachal Pradesh, Jammu and Kashmir, Karnataka, Kerala, Madhya Pradesh, Maharashtra, Manipur, Meghalaya Punjab, Rajasthan, Uttar Pradesh, Andaman and Nicobar Islands, Chandigarh, Dadra and Nagar Haveli, Delhi, Goa, Daman and Diu, Mizoram, Arunachal Pradesh, Lakshadweep, Pondicherry and Tripura.

Under the programme 15 mobile eye units are already functioning to : (i) conduct eye operation camps; (ii) educate the people on eye health care and (iii) conduct survey of causes and incidents of blindness.

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

Medical college hospitals and other hospitals in the states are to be equipped properly to improve the quality of treatment, research and training in ophthalmology. One hundred and fifty district hospitals covering 1,100 primary health centres have developed eye units so far. Financial assistance is also offered to voluntary and social organisations for organising eye camps in rural areas.

Cancer

At present 110 general hospitals offer facilities for cancer treatment by surgery, radio-therapy and chemotherapy. Research into problems of cancer is conducted at 16 hospitals and institutes situated in various parts of the country.

The Indian Council of Medical Research has initiated collaborative studies on oral, cervical and breast cancer at various centres in the country.

On the recommendations of the Cancer Assessment Committee which was set up to assess the requirements of staff, equipment and other requirements of various institutions for being upgraded to regional cancer centres, the government has decided to (i) develop three institutions as regional centres for research and treatment of cancer at Calcutta, Madras and New Delhi, and (ii) set up nine cobalt therapy units at Bhopal, Calicut, Cuttack, Gauhati, Gorakhpur, Jodhpur, Panaji, Patna and Srinagar.

Twelve cancer hospitals are totally involved in cancer therapy and research in India. Besides, certain aspects of the work in the field of cancer are being undertaken at five more institutions. Clinical aspects of cancer are being carried out at many of the hospitals and institutions where facilities are available.

Goitre

The National Goitre Control Programme was launched towards the end of the Second Five Year Plan to tackle the problem of controlling goitre which is epidemiologically associated with mental retardation, retardation of physical growth, specially in young children and adolescents, deafness, cretinism and thyroid cancer at later stage. The core of the programme is (i) survey of goitre to identify the endemic goitre areas (ii) production and supply of iodised salt to the endemic areas, and (iii) re-survey after five years of continuous supply of iodised salt in the endemic areas to assess the impact of the programme.

In India, endemic goitre is found in the entire sub-Himalayan range covering portions of the states of Jammu and Kashmir, Himachal Pradesh, Punjab, Haryana, Bihar, Uttar Pradesh, West Bengal and all the north-eastern states. It is also found in one district of Maharashtra and two districts of Madhya Pradesh. The average prevalence in these areas ranges from three per cent to sixty per cent.

Twelve salt iodisation plants have been installed with the help of UNICEF for the manufacture of iodised salt. It is distributed in the endemic goitre areas and the cost of iodisation is borne by the central government as a subsidy. Two more plants are being installed in Assam.

HOSPITALS AND DISPENSARIES

Medical services are primarily provided by the state governments. Certain charitable voluntary and private institutions also provide medical relief. The Central Government Health Scheme is at present in operation in 15 big cities covering about 24.00 lakh beneficiaries. The district and sub-divisional hospitals are being further developed by re-

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

moving deficiencies for referal services. The number of hospital beds (government and private) was 5.2 lakhs in 1978 as compared to 1.13 lakhs in 1951-52. The bed-population ratio is now 0.83 beds per 1000 population which was 0.24 at the commencement of the First Five Year Plan. The estimated number of active doctors and nurses at the end of 1978-79 was 1.72 lakhs and 1.13 lakhs respectively.

Central Government Health Scheme

The central government health scheme was launched in July 1954 for central government employees and their families in Delhi and New Delhi. It now covers Allahabad, Bombay, Calcutta, Kanpur, Madras, Bangalore, Hyderabad, Meerut, Patna, Nagpur, Pune, Jaipur, Ahmedabad and Lucknow. Central Government pensioners and widows of central government employees, who are getting family pension, are also eligible for the scheme. The staff and families of certain autonomous and semi-government organisations in Delhi, Members of Parliament and Delhi Police employees and their families are also covered by it. In certain selected areas in Delhi, the scheme has been extended to the public on payment of prescribed charges.

Primary Health Centres

The primary health centre forms the base of the integrated structure of medical services in the rural areas. At the end of December 1979, 5,463 centres were functioning in the country. The primary health centres and 49,624 sub-centres provide basic medical care to the community through multi-purpose health workers. It is proposed to have a male as well as a female health worker for every 5,000 population by 1982-83.

INDIAN SYSTEMS OF MEDICINE

The Indian systems of medicine are very popular among the rural population. They consult hereditary *Vaidyas* and *Hakims* who practise medicine as a family profession. About 2.7 lakh registered practitioners are practising these systems. In addition, 15,000 dispensaries and 350 hospitals are also functioning in the country. An amount of Rs 60.00 crores has been provided for the development of these systems during the Sixth Plan.

Under-Graduate Education

There are 90 Ayurvedic, 15 Unani and one Siddha under-graduate colleges in the country. Out of these about 51 Avurvedic and 8 Unani colleges are run by voluntary organisations. Majority of the colleges are, however, affiliated to the respective universities in the state in which they are established. The central government provides partial financial assistance to some of the private-run colleges under these systems of medicine for construction of college buildings, purchase of equipment, etc., up to a maximum of Rs 5.00 lakhs. So far, financial assistance has been given to 16 under-graduate colleges of Indian systems of medicine run by voluntary organisations.

Post-Graduate Education

Besides two full-fledged post-graduate institutions in Ayurveda at the Banaras Hindu University, Varanasi, and Gujarat Ayurveda University, Jamnagar, there are 14 post-graduate departments in Ayurveda, two in Unani and two in Siddha which are functioning in Andhra Pradesh, Bihar, Gujarat, Karnataka, Kerala, Madhya Pradesh, Maharashtra, Orissa, Punjab, Rajasthan, Tamil Nadu, Uttar Pradesh, and West Bengal. All the post-graduate institutions and departments are wholly

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

financed by the Government of India. A National Institute of Ayurveda was established at Jaipur in 1976. It is also proposed to set up a National Institute for Unani in Delhi.

HOMOEOPATHY

There are 100 institutions imparting training in homoeopathy which have been recognised by various State Boards and Councils. Seven of these are government institutions. The Homoeopathic Advisory Committee advises the central government on the development of homoeopathy.

The Homoeopathic Pharmacopoeia Committee has brought out so far, three volumes of the Homoeopathic Pharmacopoeia of India.

Under the Homoeopathic Central Council Act, 1973, a Central Council of Homoeopathy was set up on 8 August 1974. It determines the minimum standards of homoeopathic education throughout India and maintains a central register of homoeopathic practitioners.

NATURE CURE

The Nature Cure Advisory Committee in the Union Ministry of Health and Family Welfare is responsible for the development of nature cure. The central government gives grants to 24 nature cure research and educational institutes.

RESEARCH

The Central Council for Research in Indian Medicine and Homoeopathy set up in 1969 was dissolved on 10 January 1979 and four central councils, on the lines of the Indian Council of Medical Research, have been constituted. They are : (i) Central Council for Research in Ayurveda and Siddha (ii) Central Council for Research in Unani Medicine, (iii) Central Council for Research in Homoeopathy, and (iv) Central Council for Research in Yoga and Nature Cure. These apex bodies in the concerned systems of medicine are financed by the central government.

Central Council for Research in Ayurveda and Siddha : The Council carries out various research programmes, including clinical research, drug standardisation, survey of medicinal plants and literary research in its various institutes/centres. Intensive research programmes on the clinical side were carried out on different diseases including malaria and allergic disorders. Besides, laying down analytical standards for a number of popular drugs, it has carried out inter-disciplinary studies on 20 drugs. The medico-botanical survey covered 20 forest areas and 2,000 herbarium specimens and drug samples were added to the various herbaria and museum. Three research monographs have been published and six are under preparation. The Council brings out a monthly 'news letter' and a quarterly journal of research in *Ayurveda and Siddha.*

Central Council for Research in Unani Medicine : Clinical research is conducted at the central and regional institutes and other clinical research units on different diseases like vitiligo, nephritis, sinusitis, and filariasis. The survey of medical plants units continued medico-botanical surveys and the mobile units collected folklore claims and provided medical care to trachoma and malaria patients with unani drugs.

The literary research unit edits and translates rare manuscripts. A handbook of common remedies in unani medicine, already available in Hindi and English, has been printed in Urdu and is being translated into Arabic and Tamil.

Central Council for Research in Homoeopathy : It has one central research institute, two regional research institutes and 27 research units to conduct clinical research, drug research, drug proving research and

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

survey programmes. Useful results have been obtained by the Council in the treatment of bronchial asthma, allergic dermatitis, amebiasis, tonsilitis, sinusitis, rhinitis and arthritis. Six less known drugs in homoeopathy have been proved under drug proving programme and over 30 drugs have already been standardised. Anti-fertility surveys are also being conducted. The Council also publishes a quarterly journal.

Central Council for Research in Yoga and Nature Cure : It continues to provide financial assistance to four leading yoga research institutes which are conducting research on diseases such as diabetes mellitus, bronchial asthma, hypertension, arthritis and chronic gastro—intestinal disorders. It also gives grants-in-aid to 24 nature cure institutions in the country. The Council is entrusted with the task of formulation of curricula for courses in Yoga and Naturopathy. Intensive research work is being carried out in the Central Research Institute in Yoga in collaboration with the All India Institute of Medical Sciences to study the effects of Yoga on various metabolic activities of the body.

PHARMACY

The Government of India gives financial assistance to state governments for development of state pharmacies and herb gardens up to a ceiling of Rs 8 lakhs per pharmacy. In all, 12 state pharmacies will benefit. The Central Indian Medicine Corporation has been set up at Ranikhet (U.P.) as a public serctor undertaking for manufacture and supply of genuine Ayurvedic/Unani medicines to CGHS dispensaries/hospitals.

PHARMACOPOEIA

The first volume of the standard *Ayurvedic Formulary* for 444 compound formulations has been published. The Unani and Siddha formularies are being finalised. A pharmacopoeia laboratory for Indian medicine is functioning at Ghaziabad.

CONTROL AND MANUFACTURE OF DRUGS

The Drugs and Cosmetics Act regulates the import, manufacture, sale and distribution of drugs and cosmetics in the country. Under the Act, the import, manufacture and sale of sub-standard, adulterated or misbranded drugs are prohibited. The union government is empowered to check the quality of imported drugs, co-ordinate the activities of the states, lay down regulatory measures and standards of drugs and grant approval for import or manufacture of new drugs. The control over the quality of drugs which are manufactured, sold and distributed in the country is exercised by the state governments. Zonal offices of the Central Drugs Standard Control Organisation functioning at Bombay, Calcutta, Ghaziabad and Madras maintain close liaison with the state organisations for enforcement of the provisions of the Drugs and Cosmetics Act. The Central Drugs Standard Control Organisation arranges training programmes for personnel concerned with Drugs Standard Control.

The Central Drugs Laboratory, Calcutta, functions as the testing laboratory for imported drugs as well as the appellate laboratory under the Drugs and Cosmetics Act to test samples of drugs sent to it by courts. The Central India Pharmacopoeia Laboratory, Ghaziabad, tests samples of non-biological drugs and draws up standard of drugs included in the Indian Pharmacopoeia.

Prices of Drugs

The prices of drugs (excluding ayurvedic, unani and homoeopathic medicines) are regulated by the Drugs Price Control Order, 1970 which prescribes a formula for retail selling price of drugs. Prior approval of the government is necessary for revising the prices of

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

the existing drugs or for fixing the prices of new introductions. The government has fixed the selling prices of 31 important bulk drugs and gelatine capsules. No retailer can sell any formulation to a customer at a price exceeding the retail price of that formulation as displayed on the label or the price list, whichever is less.

Vaccine Manufacture

The BCG Vaccine Laboratory, Guindy, Madras, is one of the largest vaccine producing laboratories in the world. It supplies biologicals (PPD, Tuberculin and freeze dried BCG vaccine) free of cost to the states and union territories under a centrally-sponsored scheme. The laboratory is being expanded to double the production of BCG from 3.00 crore doses to 6.00 crore doses.

The Central Research Institute, Kasauli, supplies vaccine for TAB, cholera, rabies, influenza, antivenom sera and tetanus toxoid.

The Haffkine Institute at Bombay manufactures vaccines, anti-toxins and other biologicals.

There are 14 other institutes manufacturing vaccines. India is self-sufficient in the production of small-pox, BCG, anti-typhoid, anti-cholera and anti-rabies vaccines.

Objectionable Advertisements

The Drugs and Magic Remedies (Objectionable Advertisements) Act, 1955 prohibits the publication of objectionable advertisements relating to sexual stimulants, alleged magic cures for venereal diseases and diseases peculiar to women. The Act, amended in 1963, also controls the import and export of objectionable advertisements in liaison with the customs and postal authorities who can intercept article suspected to contain objectionable advertisements.

Medical Depots and Factories

The Medical Stores Organisation, with six units at Bombay, Calcutta, Gauhati, Hyderabad, Karnal and Madras, procures and ensures supply of quality medical stores and equipment to about 20,000 indenting hospitals and dispensaries all over the country at the most economical rates. It also receives supplies from international agencies like UNICEF and WHO and distributes them to the beneficiaries. It also arranges relief supplies to the victims of natural calamities in the affected areas.

At the factories of the Organisation at Bombay and Madras, a large number of drugs and dressings are manufactured to meet the requirements of the indenting units and for National Malaria Eradication Programme.

HEALTH EDUCATION

The Central Health Education Bureau, set up in 1956, co-ordinates and promotes health education through various national and state health programmes. The main activities of the Bureau, which has six technical divisions, are to interpret the policies and programmes of the Ministry of Health and Family Welfare; to train key health and community welfare workers in health education and research methods; to evolve effective methodology and tools of training; to prepare and distribute sample health education material to states and other agencies; to render technical and other assistance to official and non-official agencies engaged in health education work; to develop health education syllabi for different age groups of school children and teacher training courses at various levels; and to cooperate and collaborate with international agencies in promoting health education activities.

The Bureau publishes two monthly journals *"Swasth Hind"* in English and *"Arogya Sandesh"* in Hindi to focus attention on major

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

public health problems. It organises exhibitions on health and family welfare and other allied subjects.

The Bureau conducts diploma course and certificate course in health education. It also deals with development of health education bureaux in the states and union territories. So far 20 states and five union territories have set up health education bureaux units. Seventy-nine district health education units have also been set up.

MEDICAL EDUCATION, TRAINING AND RESEARCH

To promote medical education, 106 medical colleges, as against 30 in 1950-51, 15 dental colleges and 11 other institutions are functioning in the country. Establishment of new medical colleges and expansion of the existing ones have raised admission capacity from 2,500 in 1950-51 to over 12,500 in 1977-78. The doctor-population ratio, which was 1 : 5,150 in 1968 improved to 1 : 3,730 by 1978-79.

The Indian Medical Council functions as a guardian for the maintenance of standards in medical education.

Training of Nurses

Facilities for the training of nurses exist in all major hospitals and in colleges of nursing at Ahmedabad, Bangalore, Bombay, Chandigarh, Hyderabad, Indore, Kanpur, Calcutta, New Delhi, Pune, Trivandrum, Jaipur, Gauhati, Ranchi and Vellore. State governments and non-official organisations also organise various courses including auxiliary nurse/midwife/health workers courses. Some of these institutions get central assistance.

There are 277 nursing schools attached to major hospitals in addition to the 8 colleges of nursing affiliated to various universities. The annual out-turn from these schools and colleges is over 7,000 and over 200 respectively. Post basic diploma/certificate courses are offered for qualified nurses in public health nursing, paediatric nursing, psychiatric nursing, education and nursing administration. Nine colleges offer post basic B.Sc degree for qualified nurses and three colleges offer master's degree in nursing.

There are 329 auxiliary nurse midwife/health workers schools in the country with an annual admission capacity of over 9,000. The yearly outturn is over 6,000. Since the regular lady health visitors training has been discontinued from September 1977, these schools have been utilised for providing 6-month primary training to qualified auxiliary nurse midwife/health workers to become health supervisors/health assistants in the rural area.

Research

The Indian Council of Medical Research initiates, develops and co-ordinates medical research in the country. It is financed mainly by the Government of India. The Council maintains, besides a number of semi-permanent units, 15 permanent research institutes and centres namely, the National Institute of Nutrition, Hyderabad, Virus Research Centre, Pune; Tuberculosis Research Centre, Madras; National Institute for Cholera and Enteric Diseases, Calcutta; Indian Registry of Pathology, New Delhi, National Institute of Occupational Health, Ahmedabad; the Institute for Research in Reproduction, Bombay; the Central JALMA Institute for Leprosy, Agra; Blood Group Reference Centre, Bombay; Vector Control Research Centre, Pondicherry; Malaria Research Centre, Delhi; Institute of Research in Medical Statistics, New Delhi; Laboratory Animal Information Service, Hyderabad; Food and Drug Toxicology Centre, Hyderabad and Cytology Research Centre, New Delhi.

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

NUTRITION

The health services fight malnutrition through the network of medical and health centres. State nutrition divisions were set up in the health directorates of 18 states and two union territories to assess the diet and nutritional status in various groups of population, conduct nutrition education campaigns, supervise supplementary feeding programmes, other nutritional ameliorative measures, baseline surveys and evaluation of the Applied Nutrition Programme. These divisions are also responsible for monitoring the nutritional status of the population in areas affected by natural calamities such as flood and drought. On the recommendation of the central coordination committee for nutrition programmes, action is being taken to establish state nutrition divisions in the remaining four states and seven union territories.

Surveys conducted by the state nutrition divisions and the National Nutrition Monitoring Bureau have revealed that the protein calorie malnutrition and deficiency diseases are prevalent in large sections of the population. The most affected are young children, pregnant and lactating mothers. A number of departments of the Government of India are implementing nutrition programmes. Most of the programmes which have been started are in the form of supplementary feeding programmes. Important among them are the School Mid-day Meal Programme for primary school children and special Nutrition Feeding Programme for pre-school children and pregnant and lactating mothers. The number of beneficiaries covered is about 1.75 crore. Under the Applied Nutrition Programme, the population in rural areas is encouraged and educated for production and consumption of nutritious foods such as leafy vegetables, fruits, fish and eggs. A scheme known as the 'Integrated Child Care Development Services' has been introduced. Under the scheme, a package of services such as supplementary nutrition education, family welfare services and safe water supply would be provided to the vulnerable groups in 150 selected blocks including urban, rural and tribal areas.

To prevent blindness among children due to vitamin-A deficiency in their diet, a concentrated dose of vitamin-A is given orally every six months through health centres. This programme covered about 84 lakh beneficiaries during the Fifth Plan period. Similarly to prevent nutritional anaemia among women and children, combined tablets of iron and folic acid are being distributed through health centres. The programme covered 1.25 crore beneficiaries till 1977-78.

The National Institute of Nutrition, Hyderabad, is the principal organisation in India for nutrition research and training of nutrition workers.

Modern Bakeries

Modern Bakeries (India) Ltd., a public sector undertaking set up in 1965, produces hygienically prepared nutritious bread as well as buns, nans and roties. The Company has at present 13 manufacturing units located at Ahmedabad, Bangalore, Bombay, Calcutta, Chandigarh, Cochin, Delhi, Hyderabad, Indore, Jaipur, Kanpur, Madras and Ranchi.

PREVENTION OF FOOD ADULTERATION

The Prevention of Food Adulteration Act, 1954 has been in force since 1 June 1955. By and large, it is implemented by the local bodies in various states and union territories, but due to financial stringencies and other factors the local bodies have not been able to appoint whole-time food inspectors, establish food laboratories and implement the Act with the vigour it needed. Maharashtra, Delhi, Andhra

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

Pradesh, Gujarat, Madhya Pradesh and Bihar have established a separate department to deal with food and drug adulteration whereas the states of Kerala, Assam, Haryana, Himachal Pradesh, Jammu and Kashmir, Orissa, Punjab and West Bengal have appointed whole-time food inspectors. The Act has been amended twice in 1964 and 1976. The amended Act provides for deterrent punishment including life imprisonment with fine. As per the provisions of the amended Prevention of Food Adulteration Act, four central food laboratories on zonal basis, have been notified since April 1978. They are : Public Health Laboratory, Pune, for western zone; (ii) Central Food Technological Research Institute, Mysore, for southern zone; (iii) Food Research and Standardisation Laboratory, Ghaziabad for northern zone and (iv) Central Food Laboratory, Calcutta for eastern zone.

The central government had established a special cell consisting of six food inspectors and ancillary staff in the Directorate-General of Health Services in 1972, whose main functions are to check the adulteration of food at inter-state level, supervise, guide and co-ordinate the activities of state governments and local bodies.

The Central Food Laboratories at Calcutta and Ghaziabad are directly under the control of the Director-General of Health Services. The Central Food Laboratory, Calcutta, whose opinion is final and conclusive evidence for cases referred to by the courts, also carries out investigation work in relation to standardising methods of analysis and in reviewing food standards. The laboratory has been strengthened with the training unit, microbiology unit, pesticide and residue analysis unit.

To meet the paucity of trained analysts in the country, a training programme has been started at Central Food Laboratory, Calcutta, for in-service training to chemists working in laboratories of states/, local bodies. Five fellows, one each from Ghaziabad, Bangalore, Hyderabad, Mysore and Calcutta are availing of the opportunity to study modern analytical techniques of food analysis under the auspices of World Health Organisation Fellowship.

Another international training programme under FAO/UNEP was started at Central Food Technological Institute, Mysore, in collaboration with the Ministry of Health and Family Welfare and Ministry of Agriculture and Irrigation in 1977.

Water Supply and Sanitation

The National Water Supply and Sanitation Programme was launched in 1954 as part of the health plan to assist the states in their urban and rural water supply and sanitation schemes so as to provide adequate water supply and sanitation facilities in the entire country. A Central Public Health and Environmental Engineering Organisation (CPHEEO) was also set up in 1954 to provide technical advice and guidance to state governments in the preparation and execution of their schemes. The programme and the organisation were transferred to the Union Ministry of Works and Housing in February 1973. By March 1979, 2,108 towns had been provided with water supply benefiting a population of 10.00 crore. Also 217 towns with a population of 4.00 crores (36 per cent of the total urban population) had been covered by partial sewerage system. Of the 5.76 lakh villages, about 97,200 with a total population of about 6.5 crores had been provided with pipe water supply and hand pump tubewells up to March 1979. Of the remaining villages, about 4.00 lakhs have some kind of water supply like conserved wells and springs but in about 79,000 villages,

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

water is not available within a depth of 15 metres or a distance of 1.6 km.

FAMILY WELFARE

Family Planning as an official programme was adopted in 1952 as it was recognised that a rapidly growing population would be more a hindrance than a help in raising the standard of living of the people. During the First and Second Five Year Plans (1951–1961), the programme was taken up in a modest way with a clinical approach. The stress was mainly on research in the field of motivation, communication, demography, physiology of reproduction and on the extension of central and state organisations in providing clinical services. The programme was reorganised in the Third Plan after the publication of the 1961 census results which showed a higher growth rate than anticipated. The clinical approach was supplemented by extension approach under which the message, services and supplies of contraceptives were taken to the people. A full-fledged department was created in 1966. During the three Annual Plans (1966—69), the family planning programme, which was described as the 'kingpin' of the Plan, was made time bound and target oriented with vastly increased funds. In the Fourth Plan, the programme was accorded the highest priority. In the Fifth Plan also, the programme had highest priority and continues as a centrally-sponsored programme up to 1983-84. The approach during the Fifth Plan was to increasingly integrate family welfare services with those for health, maternal and child care and nutrition. The family welfare workers would thus be converted into multi-purpose workers who would be able to pay special attention to purveying family welfare motivation and services.

A sum of Rs 497.36 crores had been provided for this programme during the Fifth Plan as against an expenditure of Rs 14.50 lakhs in the First Plan, Rs 2.16 crores in the Second Plan, Rs 24.86 crores in the Third Plan, Rs 70.46 crores in the three Annual Plans and Rs 284.43 crores in the Fourth Plan. A sum of Rs 116.19 crores was provided for 1979-80.

Implementation Machinery

The programme is implemented through the state governments for which cent per cent central assistance is provided. In rural areas, the programme will be further extended through the Minimum Needs Programme so as to reach the remotest areas. The scheme envisages (a) one primary health centre for each community development block; (b) one sub-centre for a population of 5,000; (c) making up the backlog and deficiencies in buildings, staff and equipment; (d) provision of drugs at the enhanced level of Rs 18,000 per annum per primary health centre and Rs 2,000 per annum per sub-centre; and (e) upgrading one out of every four primary health centres to a 30-bed rural hospital.

The Central Family Welfare Council advises on family welfare programmes at the national level. A number of central committees, like the Research Co-ordination Committee, have been set up to study the progress of research programmes.

Voluntary organisations and private medical practitioners are also associated to make the maximum use of available resources for optimum results. The programme is implemented through 5,304

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

rural, 1,986 urban family welfare centres and 43,232 sub-centres. Besides 5,780 other institutions also render services.

PERFORMANCE

Sterilisation and IUD

Since the inception of the programme 302.7 lakh sterilisations and 77.8 lakh IUD insertions have been done, giving a rate of 46.3 per thousand population for sterilisations and 11.9 for IUD insertions, up to 30 September 1979.

Nirodh

During 1978-79, 12.02 crore pieces of Nirodh were sold under the commercial schemes operated through a network of over 3.8 lakh retail shops by 12 leading consumer goods marketing companies in India.

Oral Pills

The oral pill programme was extended to all the urban centres including those run by local bodies and voluntary organisations and those PHCs where the programme could be monitored and patients followed up. Now the pills are being distributed through 3,962 rural and 2,363 urban centres/hospitals in the country.

Impact of the Programme

It is estimated that 22.8 per cent of the estimated total of 11.00 crore eligible couples whose wives are in the reproductive age group 15—44 are currently protected by one or another of the approved methods of family welfare (as on 31 March 1979). It is estimated that as a result of work done up to 31 March 1979, 343 lakh births have been averted and that the national birth rate would have been 33 per thousand for 1978-79.

Medical Termination of Pregnancy

The programme of medical termination of pregnancy through well trained doctors in well equipped/approved hospitals is essentially a health care measure. But in a way, it supplements the family welfare programme as it provides for legalised abortion in cases of contraceptive failures also. A good proportion of the acceptors of abortion go in for some form of contraception like sterilization, IUD, etc. Since its inception in April 1972, it has continued to make good progress. During 1978-79, 3,12,754 terminations were done. The number of terminations done from April to September 1979 was 1,46,637. Since the inception of the programme, a total of 13,62,733 terminations have been done. So far 60 senior gynaecologists drawn from medical colleges as well as from district hospitals have been trained abroad under the WHO sponsored programme in the advanced techniques of medical termination of pregnancy and 166 hospitals in the country have been approved to provide training in MTP techniques to doctors drawn from various district hospitals and PHCs. With the assistance of WHO, ICMR has undertaken research in short term sequalae and complication of induced abortion in 16 centres in India. Eleven of these centres will also provide training in advance technique of MTP and sterilisation to gynaecologists from contiguous states. With these measures, this programme is expected to get a boost further in the coming years.

Maternal and Child Health Programme

This programme is an important and crucial component of the family welfare programme as with better maternal and child health care, the performance is expected to improve. The services under this programme consist of immunisation (DPT) to expectant mothers, pre-school and school children, prophylaxis against nutritional anaemia among mothers

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

and children and against night blindness due to vitamin 'A' deficiency. A sum of Rs 6.04 crore has been provided for the programme during 1979-80.

Post-Partum Programme

This programme, aimed at propagating the message of family welfare among women attending hospitals for delivery and abortion, is now extended to 524 hospitals as against 501 last year.

Training

The training programme under the Multipurpose Workers Scheme is being implemented in 70 selected districts in the first phase. District level officers, medical officers, block extension educators and other category of personnel are being trained in the central health and family welfare training centres.

Training of personnel in 28 districts was completed in 1976-77. The training strategy has been revised so as to complete the training by 1981-82 and start implementation as soon as the training was over in a district. During 1977-78, personnel in 60 districts were trained and multi-purpose services are being provided in 88 districts. Training of personnel in 123 districts is under way and is expected to be completed by September 1980.

Motivation and Education

The family welfare programme in India depends on its voluntary acceptance by the people. To approach over 11 crore literate and illiterate couples in the reproductive age group, living in urban and remote rural areas, a broad based mass education and motivation programme has been launched. Besides mass media like the Press, the Films, the Radio and the TV, oral and visual communication media like song and drama troupes and inter-personal communication through a network of extension education workers are being used on an extensive scale. Population education is also being introduced in school curricula. Out-of-school-adults are also being educated through the functional literacy classes. Co-operation and assistance of all official and non-official agencies working in the field of development like trade unions, co-operatives, panchayats and other local institutions are also enlisted for promoting the programme. The Mass Mailing Unit of the Department of Family Welfare disseminates information in the form of printed materials (including booklets, folders and journals) to various categories of opinion leaders through direct mail service. The list includes over 10 lakh addresses.

Research and Evaluation

Research activities continued in the field of demography and communication action through 13 Demographic and/or Communication Action Research Centres situated in 13 states. Similarly bio-medical research in the field of reproductive biology and fertility control is being done in the Indian Council of Medical Research, Council of Scientific and Industrial Research, All India Institute of Medical Sciences, National Institute of Health and Family Welfare and Central Council of Research in Indigenous Medicines and Homoeopathy. The Coordination Committee on Biomedical Research was reconstituted on 29 January 1976.

Some major international agencies offer assistance to India in the field of health and family welfare. They are WHO, UNICEF, UNFPA and the World Bank. Some other foreign agencies also assist the programme on a bilateral basis.

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

Health Care and Family Welfare

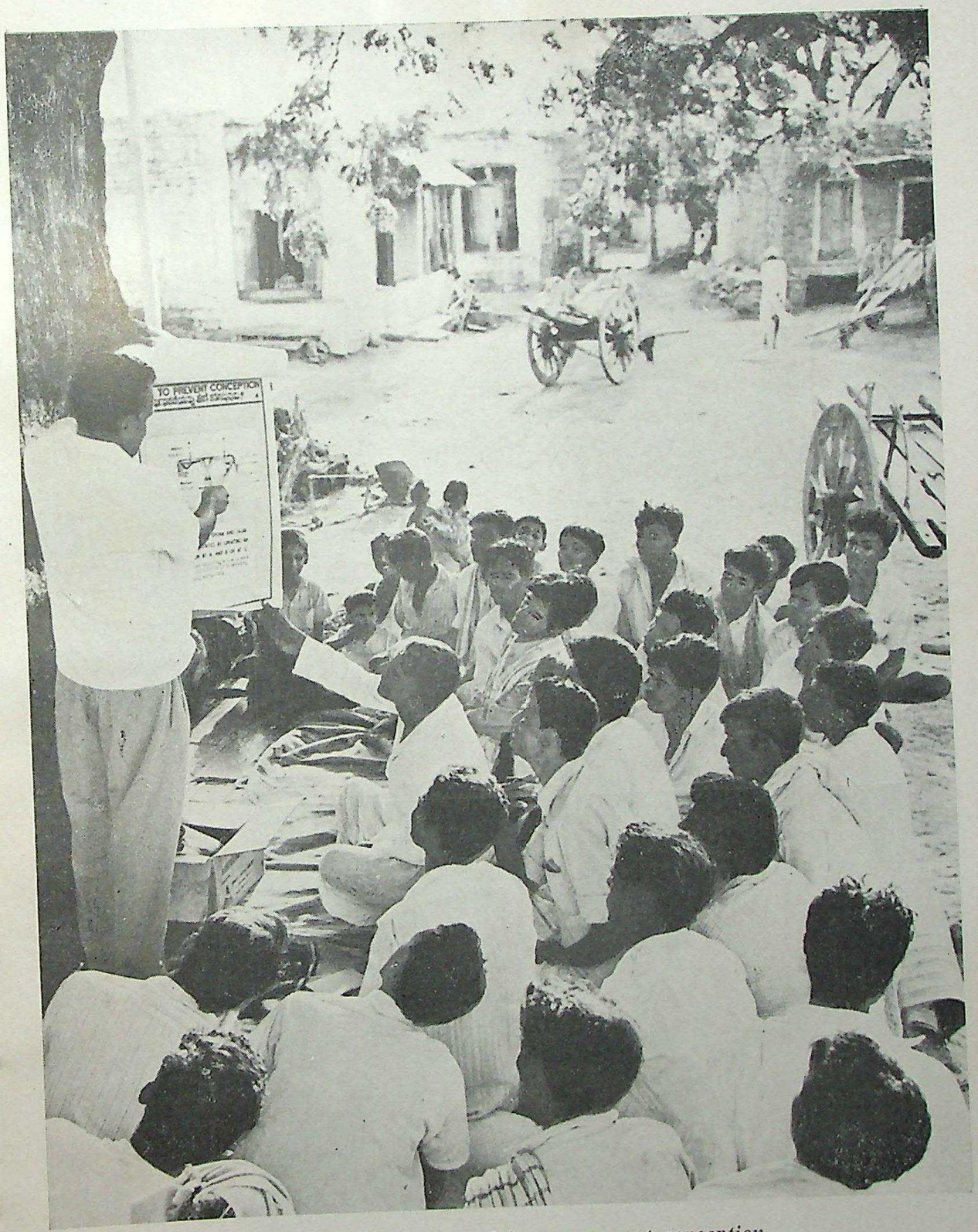
Measuring up the kids at a school

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

A woman health educator explains family welfare to village folk.

An ante-natal clinic

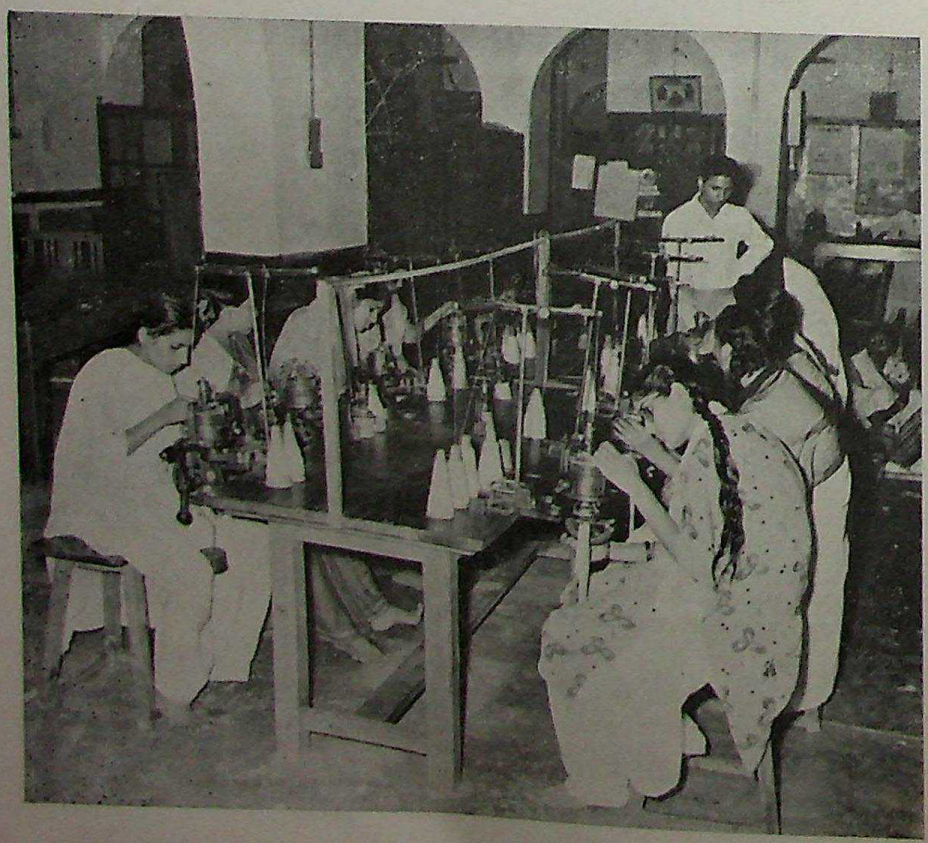
CC-0. Agamnigam Digital Presevation Foundation, Chandigarh



Unravelling the mystery of procreation and how to prevent conception

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

Assembling a transformer



Hosiery knitting secti
Training Centre for w

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

n of the Industrial
nen

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

A mobile medical unit for child care

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

Delicate hands wielding a deadly weapon—
A woman police

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

The fingers behind precision—A woman working at H. M. T. Watch Factory, Bangalore

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

9 SOCIAL WELFARE

Social welfare activities in the country find their inspiration in the Indian Constitution which postulates the goal of a welfare state. Article 38 of the Constitution enjoins that the State shall strive to promote the welfare of the people by securing and protecting as effectively as it may, a social order in which justice—social, economic and political—shall inform all the Institutions of the national life. They also enjoin the State to ensure that 'the health and strength of workers, men and women, and the tender age of children are not abused and that citizens are not forced by economic necessity to enter avocations unsuited to their age and strength', and that 'childhood and youth are protected against exploitation and against moral and material abandonment.'

The social welfare services in almost three decades of planning have sought to serve the development and rehabilitation needs of the weaker sections of society, especially the physically and socially handicapped and women and children from the vulnerable sections of the community in rural and tribal areas and urban slums.

EXPENDITURE ON WELFARE PROGRAMMES

The expenditure on social welfare programmes since the beginning of the First Plan is given in table 9.1.

TABLE 9.1
EXPENDITURE ON SOCIAL WELFARE

(*Rs. crores*)

	First Plan	Second Plan	Third Plan	1966-69 Annual Plans	Fourth Plan	Fifth Plan	1978-83 Sixth Plan (Outlay)
Centre . . .	1·60	8·49	12·84	7·76	65·71	43·52	110·00
States . . .	..	4·95[1]	5·63	3·20	9·36	13·60	84·29
Union Territories .	..	..	0·93	0·60	1·43	1·72	6·71
TOTAL .	1·60	13·44	19·40	11·56	76·50	58·84	201·00

[1]Includes union territories.

SOCIAL WELFARE ADMINISTRATION

Department of Social Welfare

India being federal in structure, the responsibility for implementation of welfare schemes rests with both the centre and the state governments. The centre is also responsible for formulating the nation's policy for social welfare services and co-ordinating, guiding, prompting and promoting the implementation of welfare services by the states. Department of Social Welfare was created on 14 June 1964 (upgraded to the level of ministry in 1979), by pooling together different welfare programmes which were hitherto administered by different ministries in the Government of India.

The work of the Union Ministry of Social Welfare is now carried out through three Bureaux (i) nutrition and child development, (ii) social security and social defence and (iii) women welfare and development. The central social welfare board, the national institute of public cooperation and child development and the national institute of social defence assist the ministry in its functions.

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

Central Social Welfare Board

The central social welfare board (CSWB), was set up in 1953 to promote and accelerate voluntary action, throughout the country. The chairman of the Board is appointed by the Government of India from amongst prominent women social workers. Among its main activities are : survey of the needs of social welfare organisations; evaluation of their programmes; co-ordination of the assistance given by various central ministries and state governments and render financial assistance to voluntary welfare agencies. The Board also promotes the development of voluntary organisations in areas where they do not exist as well as social welfare activities for the welfare of the family, women, children, the handicapped and others.

The main programmes currently implemented by CSWB are condensed courses of education for adult women, socio-economic programmes of women in need of work and wages, creches for children, general grants-in-aid, etc.

Social welfare advisory boards have been set up in almost all the states and union territories. A sizable portion of the financial assistance from CSWB is extended to voluntary institutions through the state boards.

Annual Expenditure

The plan expenditure during 1977-78 and 1978-79 and outlay for 1979-80 under major heads for the central and centrally sponsored programmes is given in table 9.2.

TABLE 9.2 ANNUAL PLAN EXPENDITURE

(Rs Lakhs)

Scheme	Expenditure		
	1977-78	1978-79	1979-80 B. E.
Family and child welfare projects	20·00	1·00	—
Functional literacy	33·00	133·86	175·00
Condensed course of education for adult women	80·00	90·00	100·00
Socio-economic programmes	120·00	150·00	150·00
Hostels for working women	121·00	201·46	150·00
Expansion and improvement of national institutes for the handicapped	31·00	43·84	60·00
Scholarships, research, training, sheltered employment and grants-in-aid to voluntary organisations for the welfare of the handicapped.	117·00	155·69	100·00
National institute of social defence	6·00	6·73	8·00
National institute of public cooperation and child development	11.00	11·97	30·00
Social work education and training	31.00	89·17	84·50
Planning, research, evaluation and monitoring	13·00	13·02	9·50
Grants-in aid to all India voluntary organisations	21·00	25·07	25·00
Grants-in aid to voluntary organisations by the CSWB	210·00	268·00	275·00
Creches for children of working/ailing mothers	45·00	50·00	60.00
Education work for prohibition	4·00	8·50	15·00
Services for children in need of care and protections	228·00	250·89	50.00
Integrated child development services	129·00	340·15	490.00
Integrated education of the handicapped	10·00	11·15	6.00
Placement of handicapped through special employment exchanges	5·00	18·69	30·00
Welfare of destitute women and children	11·00	26·13	20·00
Others	—	11·02	—
Total	1,246·00	1,906·34	1,838·00

B. E.-Budget Estimate

CC-0. Panjab Digital Presevation Foundation, Chandigarh

State Social Welfare Advisory Boards

Social welfare advisory boards have been set up in almost all the states and union territories. They serve as the media for exchange of information between the field and the centre and co-ordinate the welfare activities of the state governments and CSWB to avoid duplication. A major portion of the financial assistance from the CSWB is extended to voluntary institutions through the state boards.

WELFARE PROGRAMMES

The various programmes of social welfare fall broadly under six heads, namely, programmes for women, programmes for children, composite programmes for women and children, schemes for maladjusted groups, programmes for physically handicapped persons and social legislation.

WELFARE OF WOMEN

Machinery for Women's Welfare and Development

The national machinery set up in India for women's welfare and development consists of (i) national committee on women, (ii) a steering committee of the national committee, (iii) an inter-departmental coordination committee and (iv) women's welfare and development bureau.

Prohibition of Dowry

Taking and giving of dowry has been declared as violation of government servant's conduct rules for central government employees. States were advised to take similar action. Kerala, Himachal Pradesh, Tamil Nadu and Andhra Pradesh have implemented the advice. Orissa, Bihar, West Bengal, Haryana, Punjab and Himachal Pradesh had amended the dowry prohibition Act 1961 in order to make the existing law more effective. Bihar and Himachal Pradesh have made the offences under the Act cognisable.

The Ministry has also constituted an Inter-Departmental Co-ordination Committee on Women's Welfare to ensure systematic communication, consultation and coordination among the various ministries and departments. The functions of the Committee at the state level include reviewing the progress in the implementation of various constitutional provisions and special laws intended to safeguard the interests of women, suggesting ways and means of removing defects in implementation, and bringing about coordination among various departmental programmes.

Functional Literacy for Adult Women

A new scheme of functional literacy for adult women in the age group between 15-45 years was started in 1975-76. The scheme offers non-formal education to cover elements of health and hygiene, food and nutrition, home management and child care, school education and vocational/occupational skills. The scheme is being implemented in 150 integrated child development services project areas.

Condensed Course of Education and Vocational Training for Adult Women

The scheme of condensed course of education for adult women was started by the central social welfare board in 1958 for opening new vistas of employment to deserving and needy women and for creating a band of competent trained workers such as primary school teachers, balsevikas, nurses, health visitors, mid-wives and family planning workers.

Under the scheme, women in the age group 18-30, who have had some schooling, are prepared for middle school, matriculation or equivalent examination within two years. From 1975-76, two new com-

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

ponents, *viz.*, one year course for failed candidates and vocational training courses, have been added to the scheme. Since the inception of the scheme in 1958, the Board had sanctioned grants for 3,783 crores benefiting about 82,230 women.

Mahila Mandals Mahila Mandals are women's organisations running welfare programmes in rural areas. The CSWB gives grants up to 75 per cent of their expenditure. During 1978-79, 409 Mahila Mandals were given grants amounting to Rs 47.8 lakhs.

Working Women's Hostels To provide accommodation at reasonable rates to working girls in urban areas, CSWB has sponsored the setting up of working women's hostels. Since the inception of the scheme in 1972-73, 170 hostels with a total capacity for 11,822 inmates had been sanctioned. The Board gives grants to voluntary institutions running hostels for working women of lower and middle income groups. During 1978-79, 54 such hostels were assisted.

Border Area Projects Welfare services in the border areas of the country have been strengthened with the setting up of welfare centres in the border areas of Arunachal Pradesh, Leh in Jammu and Kashmir, Lahaul and Kinnaur in Himachal Pradesh, Chamoli in Uttar Pradesh, Kachchh and Banaskantha in Gujarat and Srikaranapur and Jaisalmer in Rajasthan. These centres provide maternity services, infant care, craft training and social education for women. There are now 86 such centres in the border areas.

Socio-economic Programme This programme of the central social welfare board, started in 1958, aims at providing needy women, destitutes and physically handicapped persons with work and wages to supplement the meagre income of their families. A new component in the form of dairy scheme was added to this programme in 1975-76. During 1978-79, assistance was given to 819 units for generating employment opportunities for about 8,500 women.

Other Measures A number of legislative and administrative measures relating to women welfare have also been undertaken. The Equal Remuneration Act was passed in 1976 which provides for : (i) the payment of equal remuneration to men and women workers and (ii) prevention of discrimination on the grounds of sex against women in matters of employment and for matters connected therewith or incidental thereto.

Several state governments have taken action for amending the provisions relating to dowry by imposing more rigorous penalties and by streamlining the enforcement machinery.

The Factories (Amendment) Act, 1976 provides for the establishment of a creche where 30 women are employed (including casual labourers or contract labourers) as against one for every 50 so far.

The Maternity Benefits Act, 1961 was amended in April 1976 to cover women who do not fall within the purview of the Employee's State Insurance Act, 1948.

By the Marriage Laws Amendment Act, 1976, the Hindu Marriage Act, 1955 and the Special Marriage Act, 1954 have been amended to provide for the right of a girl to repudiate before attaining maturity, her marriage as child, whether the marriage has been consummated or not. Cruelty and desertion have been added as grounds for divorce

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

and mutual, consent for divorce has been recognised. The Child Marriage Restraint Act has been amended recently and the age at marriage of a girl raised from 15 to 18 years.

PROGRAMMES FOR CHILDREN

Nutrition Programmes

To meet the widespread nutritional deficiency among children, especially those belonging to the lower economic strata, the Government of India introduced the special nutrition programme in 1970-71 to provide supplementary nutrition children of 0-6 years of age and expectant and nursing mothers in the tribal areas and urban slums in towns with more than one lakh population. About 70.00 lakh beneficiaries, including over 7.00 lakh expectant and nursing mothers were provided supplementary nutrition under the programme during 1978-79. The programme is functioning in all the states and union territories.

In addition to the special nutrition programme, the Ministry of Social Welfare started another programme in 1970-71 through *balwadis* run by voluntary institutions, under which children between 3 and 6 years were provided supplementary nutrition. About 2.30 lakh children are covered under this programme in over, 6,000 *balwadis.*

World Food Project is operating in India in ten states since the middle of 1976. Under the project, supplementary nutrition is provided to pre-school children below 6 years, pregnant women and nursing mothers from the vulnerable sections of society. The target for the programme in its current Phase II is to cover about 18.85 lakh beneficiaries. The continuance and expansion of the project into Phase III to cover 20 lakh beneficiaries has been approved.

CARE assistance is made available to 13 states and 2 union territories for about 103 lakh beneficiaries under the mid-day meal programme and about 62 lakh beneficiaries under the supplementary nutrition programme for pre-school children and mothers.

Owing to unprecedented drought in 1979, the Government of India has allocated one lakh tonnes of foodgrains to implement food-for-nutrition programme for the vulnerable sections of the population in 11 states. It is estimated to cover about 67 lakh beneficiaries in about six months.

Integrated Child Development Services

In the Fifth Plan highest priority had been accorded to child welfare programmes. The most important scheme in this field was the integrated child development services (ICDS) for children in the age group of 0-6 years, nursing and expectant mothers, etc. Under the scheme, a package of services consisting of supplementary nutrition feeding, immunisation, health check-up, referral services, nutrition and health education and non-formal pre-school education was delivered. There are now 150 projects of which 24 are located in urban, 72 in rural and 54 in tribal areas.

A Child Development Project Officer is directly in-charge of each ICDS project. The focal point for delivery of services is an *anganwadi.* The work of *anganwadi* workers is supervised by *mukhyasevikas.* The health infra-structure in the project area is strengthened by one medical officer, lady health visitors and additional auxiliary nurse-*cum*-mid-wives to increase the number of primary health sub-centres to one for a unit of 5,000 population in rural tribal projects.

Other Services for Children

Providing care and protection to abandoned, neglected, unwanted and destitute children is another important programme implemented by the Ministry of Social Welfare. The need for such a programme has

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

arisen as a result of the break-up of the old family system which provided care and shelter to dependent children. Under the scheme, started in 1974-75, assistance is provided to voluntary organisations through the state government for residential care as well as foster care of destitute children. During 1974-75, assistance of Rs 76 lakhs was given for the benefit of 9,665 children in need of care and protection. During 1976-77, the assistance was increased to Rs 1.63 crores for providing service to 19,810 children. The Fifth Plan physical target of covering 25,000 children was achieved by the end of 1977-78. Financial assistance of Rs 850.32 lakhs was sanctioned by the end of 1978-79 for the maintenance of 32,288 children. During 1979-80, grants were given to cover about 8,100 more children.

The scheme for giving grants to voluntary organisations for running creches for children in the age group 0-5 years of working and ailing women is now being implemented by the central social welfare board. Only those children whose parents' total monthly income is less than Rs 300 are eligible for admission to the creches. The programme has gained considerable momentum and the number of beneficiaries is expected to reach 50,000 by the end of 1979-80.

Holiday Camps

The scheme of holiday camps for children was started in 1958. The CSWB extends financial assistance to voluntary institutions for organising such camps for children belonging to low income group families. In 1978-79, grants were sanctioned for 677 camps benefiting 24,020 children.

Foster Care Homes

To provide care for children affected by desertion, divorce, long illness or imprisonment or death of either parent, three foster care homes, one in Madras and two in Bombay, are being run by voluntary institutions. During 1976-77, Rs 85,000 were sanctioned by CSWB to these institutions.

National Institute of Public Cooperation and Child Development

The National Institute of Public Cooperation and Child Development located in Delhi undertakes research, evaluation and training in the field of voluntary action and child development. Its programme of activities covers research on a wide range of problems and training of ICDS and field level functionaries as well as senior personnel in social administration. The Institute has set up a field unit at Gauhati.

Training Programmes

The central government has sponsored a number of training programmes for field level functionaries. *Balsevika* training programme was started during 1961-62 to train child welfare workers. At present there are 36 such centres imparting eleven months training in pre-school education, recreation, health, nutrition and social work. By the end of 1979, 10,800 workers had been trained by these centres. In addition, six family and child welfare training centres were established during the Third and Fourth Plan periods to train the field staff of family and child welfare projects. Grants are also being given by the centre to the *Grameen Mahila Sangh* for organising short duration training camps for field workers in the development of leadership and in improved agriculture. To meet the growing needs for social workers, particularly in the voluntary sector, the National Institute of Public Cooperation and Child Development and the National Institute of Social Defence also organise short duration courses and workshops for non-officials.

CC-0. Jagmohan Digital Presevation Foundation, Chandigarh

National Policy for Children

In August 1974, the Government of India adopted a national policy resolution for children. The resolution spells out the various measures to be adopted and the priorities to be assigned in children's programmes. In accordance with the resolution a National Children's Board was set up in December 1974 with Prime Minister as its president. Similar boards have been constituted in all states except Chandigarh.

International Year of the Child

1979 which was declared by the United Nations as the International Year of the Child (IYC) was observed in India with action programmes. The National Children's Board was designated as the National Commission for IYC.
the voluntary sector, the National Institute of Public Cooperation and with the idea of undertaking concrete programmes in the vital sectors of nutrition, health, education, welfare, legislation, publicity and fund-raising. The theme of the plan was "reaching the deprived child", emphasising high priority to the deprived children from the weaker sections of society and poverty striken groups in backward, rural and tribal areas and urban slums.

Several schemes were launched during the year and the existing ones expanded. A mass immunisation programme was undertaken. A National Children's Fund has been constituted to promote the efforts of voluntary organisations in the field of child welfare. IYC seals were sold to augment the funds of the National Children's Fund. Special awards for outstanding work done in the field of child welfare both for the individual as well as for the organisation have been instituted commencing from 1979. Various informative and promotional measures were taken through the mass media, seminars, workshops, etc., to create awareness and generate interest in child development.

IYC is not viewed as one year programme but as a spring board for vigorous and continued action during the residual part of the century. A perspective plan for child development for the next two decades is being evolved so as to provide guidelines for planners both at the centre and in the states.

MALADJUSTED GROUPS SOCIAL DEFENCE PROGRAMMES

In order to curb various forms of personal and social misorganisations, government has taken up special programmes for maladjusted groups and individuals. These programmes known as social defence programmes are organised mainly within the frame work of specific legislations and allied measures. These measures include preventive, correctional and rehabilitative services in various areas of social defence such as, welfare of prisoners, delinquency control, probation, beggary control and social and moral hygiene.

Welfare of Prisoners

Under the scheme, welfare officers look after the individual problems of prisoners and assist in solving them in liaison with their families. Creches are established in some prisons for the children of women prisoners.

Juvenile Delinquency

Juvenile delinquency is a state subject. Children's Acts of various states provide for necessary machinery such as juvenile courts, child welfare boards, remand/observation homes, special/certified/approved schools for prevention and treatment of juvenile delinquency. The Central Children's, Act, 1960 is applicable to all the union territories

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

It has also been adopted by most of the states. To plug certain deficiencies in its implementation, the Act was amended in 1978.

Probation Services

The Probation of Offenders, Act, 1958 contains a mandatory provision for calling upon the courts to consider a Social Investigation Report from the Probation Officers in respect of youthful offenders under 21 years of age. It also provides for the release of offenders below the age of 21 years on probation. It is a central legislation which has been adopted by most of the states. There are also some voluntary organisations that grant financial and other assistance to those released on probation such as hostel accommodation and employment assistance.

Beggary Prevention

Many states have passed anti-beggary legislation. In others, Municipal and Police Acts provide for measures against begging. The Government of India is preparing a model legislation for union territories.

Social and moral Hygiene

The Indian Constitution prohibits traffic in human beings. The Government of India passed in 1956 Suppression of Immoral Traffic in Women and Girls Act. It is a central legislation applicable to the whole of the country and empowers the state governments to make rules for its smooth application. Under the Act, women and girls rescued from brothels are sent to protective or corrective homes. Various states and union territories have set up protective homes, reception centres, short-stay homes and district shelters for women and girls facing moral danger. Experience gained in the implementation of the Act has brought to light certain inadequacies. To remove these inadequacies, the Act has been amended suitably.

National Institute of Social Defence

The central bureau of correctional services, established in 1961, was reconstituted and renamed on 1 January 1975 as the National Institute of Social Defence. The Institute has been assigned technical functions with regard to the coordination, standardisation and development of social defence programmes in various areas including those relating to the prevention of alcoholism, gambling, suicide and drug addiction.

To achieve its goals, the Institute undertakes research, collects statistics, promotes training, drafts model legislations and rules, creates public awareness on social defence problems and establishes liaison with universities and concerned agencies. It also advises central and state governments on various aspects of social defence development. The Institute brings out professional publications including its quarterly journal, "Social Defence."

Welfare of Physically Handicapped

Programmes are being implemented for the education, training and rehabilitation of four categories of handicapped persons, namely, the blind, the deaf, the orthopaedically handicapped and the mentally retarded. Three per cent of group 'C' and 'D' posts are reserved in central services and public sector undertakings for the physically handicapped. From 2 October 1977, the central government allowed holders of motorised vehicles on which the tax had been exempted by the state governments concerned, a concession of 50 per cent in the cost of petrol/diesel used by them subject to certain stipulated ceilings.

Blind

There are 140 schools and training centres for the blind in the country. The National Centre for the Blind, Dehra Dun, provides integrated

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

services. The model school for blind children attached to the Centre is a secondary school. The Centre also has a training centre for the adult blind, a school for partially sighted children, a workshop for the manufacture of Braille appliances, a sheltered workshop and the central Braille press. The national library for the blind, which also forms part of the Centre, circulates Braille literature in the country. The four teachers' training centres at Delhi, Bombay, Calcutta and Madras train 40 to 50 teachers for the blind annually.

Deaf

The National Centre for the Deaf at Hyderabad has a training centre for the adult deaf and a school for partially deaf children, the only one of its kind in the country. The training centre imparts training in tailoring, sheet metal work, electrical wiremenship, carpentry, fitting, gas welding and photography.

Orthopaedically Handicapped

A National Institute for the Orthopaedically Handicapped has been set up in Calcutta. The Institute will concentrate on research and training of personnel for the rehabilitation of the orthopaedically handicapped.

Mentally Retarded

A model school for mentally deficient children is functioning in Delhi for children in the age group 6-15. The school also provides training in a few crafts.

Integrated Education

The national policy resolution on education suggests that as far as possible handicapped children should be placed in ordinary schools. For this, a scheme has been drawn up and forwarded to various state governments. At present ten states and one union territory are implementing the scheme.

Other Services

Assistance is given to voluntary organisations serving the handicapped and to cured leprosy patients. The extent of assistance set at 75 per cent has recently been raised to 90 per cent of the estimated expenditure on approved items. In 1978-79, Rs 95.56 lakhs were given to 120 organisations. There were 17 special employment exchanges in the country for the physically handicapped by the end of 1978-79. They have placed about 18,950 persons in employment.

WELFARE SERVICES FOR THE AGED

With increasing life expectancy, the number of aged people is increasing. According to the 1971 census, 3.36 per cent of the population was 65 years and over as compared to only 1.98 per cent in 1881.

In the Indian family system, the care of the aged is the responsibility of their children or other close kins. Although this responsibility is generally discharged, force of circumstances sometimes leaves old people without any means of support, specially since only a very small percentage (including employment in government or public sector agencies) in currently covered by pension, gratuity, etc.

Fourteen state governments and two union territories have started schemes of cash assistance to old people who are without any means of support. Homes for the aged and other services to assist the aged in their homes have also been started by both government and voluntary agencies.

Scholarships

The Union Ministry of Social Welfare awards scholarships to the blind, deaf and orthopaedically handicapped students for general education and for technical and professional training. About 7,000 scholarships

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

are awarded annually. The implementation of the scheme was decentralised from 1 April 1977 in five states and one union territory. Since 1 April 1978 the scheme has been further decentralised in other ten states and six union territories.

National Awards National awards are given every year to outstanding employers of the handicapped and the most efficient handicapped employees by the government and private sector, public sector undertakings, local bodies and corporations, etc. Self employed handicapped have also been included now. 18 efficient physically handicapped employees and nine outstanding employers were given awards in 1978.

PROHIBITION The Constitution (Article 47) enjoins on the State to endeavour to bring about prohibition of the consumption of intoxicating drinks and drugs. The Central Prohibition Committee, constituted to formulate the national policy on prohibition, recommended introduction of total prohibition in a phased manner in four years ending March 1982. The union government has formulated guidelines for implementing the prohibition policy. The implementation of this policy is the responsibility of state governments. Assistance is given by the Union Ministry of Social Welfare to voluntary organisations for educative publicity programme in favour of prohibition.

RESEARCH AND EVALUATION The Union Ministry of Social Welfare is implementing a scheme for sponsoring of research and evaluation studies which are undertaken by universities, schools of social work, research institutes, etc.

About 125 research projects have been sanctioned on a wide range of subjects in the filed of social welfare and social development. Statistical compilations are also brought out at periodic intervals apart from handbooks on different programmes.

SCHEDULED AND BACKWARD CLASSES

The Scheduled Castes (SC) and Scheduled Tribes (ST) have been specified by fifteen Presidential Orders issued under the provisions of Article 341 and 342 of the Constitution. According to the 1971 Census, about 22 per cent of the country's population comprised the Scheduled Castes and the Scheduled Tribes. In addition, some state governments have also specified other categories of people known as the "other backward classes" and the denotified, nomadic and semi-nomadic communities. No precise figure of the population of these categories is available.

While the Constitution has prescribed certain protective measures and safeguards for these classes, the successive five year plans have regarded their progress as a major objective of national policy.

CONSTITUTION SAFEGUARDS The Constitution prescribes protection and safeguards for the scheduled castes and tribes, and other backward classes either specially or by way of insisting on their general rights as citizens with the object of promoting their educational and economic interests and of removing the social disabilities. The main safeguards are :

(i) the abolition of 'untouchability' and the forbidding of its practice in any form (art. 17);

(ii) the promotion of their educational and economic interests and their protection from social injustice and all forms of

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

exploitation (art. 46);

(iii) the throwing open by law of Hindu religious institutions of a public character to all classes and sections of Hindus (art. 25);

(iv) the removal of any disability, liability, restriction or condition with regard to access to shops, public restaurants, hotels and places of public entertainment or the use of wells, tanks, bathing ghats, roads and places of public resort maintained wholly or partly out of State funds or dedicated to the use of the general public (art. 15);

(v) the curtailment by law, in the interests of any scheduled tribe, of the general rights of all citizens to move freely, settle in, and acquire property [art. 19(5)];

(vi) the forbidding or any denial of admission to educational institutions maintained by the State or receiving aid out of State funds (art. 29);

(vii) permitting the State to make reservation for the backward classes in public services in case of inadequate representation and requiring the State to consider the claims of the scheduled castes and tribes in the making of appointments to public services (art. 16 and 335);

(viii) special representation in the Lok Sabha and the state Vidhan Sabhas to scheduled castes and tribes till 25 January 1990 (arts. 330, 332 and 334);

(ix) the setting up of tribes advisory councils and separate departments in the states and the appointments of a special officer at the centre to promote their welfare and safeguard their interests (arts. 164 and 338 and Fifth Schedule);

(x) special provision for the administration and control of scheduled and tribal areas (art. 244 and Fifth and Sixth Schedules); and

(xi) prohibition of traffic in human beings and forced labour (art. 23).

LEGISLATION AGAINST UNTOUCHABILITY

For enlarging the scope and making the Penal Provision more stringent, the Untouchability (Offences) Act 1955 had been comprehensively amended by the Untouchability (Offences) Amendment and Miscellaneous Provisions Act, 1976 which came into force from 19 November 1976. With this amendment, the name of the principal Act has been changed to the Protection of Civil Rights Act, 1955. The Act provides penalties for preventing a person, on the ground of untouchability, from entering a place of public worship and offering prayers or taking water from a sacred tank, well or spring. Penalties are also provided for enforcing any kind of social disability such as denying access to any shop, restaurant, public hospital or educational institution, hotel or any place of public entertainment, or denying the use of any road, river, well, tank, water tap, bathing ghat, cremation ground, sanitary convenience, *dharmshala, sarai* or *musafirkhana* or utensils kept in such institutions and hotels and restaurants. The Act prescribes penalties for enforcing occupational, professional or trade disabilities, or disabilities in the matter of enjoyment of any benefit under a charitable trust, in the construction or occupation of any residential premises in any locality or in the observance of any social, religious usage or ceremony.

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

The Act also lays down penalties for refusal to sell goods or render services to a person on the ground of untouchability, molesting, injuring or annoying a person or organising a boycott of, or taking any part in the ex-communication of a person who has exercised the rights accruing to him as a result of the abolition of untouchability.

Direct or indirect preaching of untouchability or its practice in any form or its justification, whether on historical, philosophical or religious grounds or on the ground of any tradition of the caste system or any other ground is deemed to be an offence under the Act.

Compulsion on the ground of "untouchability" to do any scavenging or sweeping or to remove any carcass or to flay any animal or to remove an umbilical cord or to do any other job of a similar nature, is deemed to be an enforcement of a disability arising out of untouchability and is an offence under the Act.

Offences under the protection of Civil Rights Act, 1955 are cognizable as well as non-compoundable. There is a provision for awarding minimum punishment of both imprisonment and fine. For the first offence, the punishment may vary from imprisonment of one month and fine of Rs 100 to imprisonment of six months and fine of Rs 500. For the second offence, the punishments range from imprisonment of six months and fine of Rs 200 to imprisonment of one year and fine of Rs 500. For the third and subsequent offences, the quantum of punishment may vary from imprisonment of one year and fine of Rs 500 to imprisonment of two years and fine of Rs 1,000. Offences with a minimum term of three months' imprisonment are triable summarily by the courts.

Incitement or abetment of untouchability offence has been treated in the same manner as the commission of the offence. Moreover, a public servant who wilfully neglects the investigation of any offence punishable under the Act, is deemed to have abetted an offence under the Act. The state governments are empowered to impose collective fines on the inhabitants of any areas where such people are involved in or abetting the commission of untouchability offences.

Under the provision of Section 8 of the Representation of the People Act 1951, a person who is convicted of an offence under the Act is disqualified from contesting elections to Parliament and state legislatures for a period of six years commencing from the date of such conviction.

The Protection of Civil Rights Act, 1955 is administered by the state government also from time to time. Under a provision in the Act, the central government also lays, every year, before each house of Parliament an annual report on the working of Section 15A of the Act.

POPULATION

According to the 1971 census, the population of the scheduled castes and scheduled tribes was 8,24,80,251 and 4,11,47,922 respectively. Table 9.3 shows their state-wise distribution.

REPRESENTATION IN LEGISLATURES

Under articles 330 and 332 of the Constitution, seats are reserved for the scheduled castes and scheduled tribes in the Lok Sabha and state Vidhan Sabhas in proportion to their population. This concession was initially for a period of 10 years from the commencement of the Constitution but has been extended, through amendments, up to 25 January 1990. Parliamentary Acts provide for such reservations in

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

the union territories having legislatures. Table 9.4 gives details of their representation in the Lok Sabha and Vidhan Sabhas. There is no reservation of seats in the Rajya Sabha and State Vidhan Parishads.

Following the introduction of Panchayati Raj, safeguards have been provided for proper representation of the members of the scheduled castes and tribes by reserving seats for them in the gram panchayats and other local bodies.

RESERVATION IN THE SERVICES

The manner in which the State carries out its obligation to reserve posts for the scheduled castes and tribes in the public services in case of inadequate representation and to consider their claims consistent with the maintenance of efficiency of administration has been left outside the purview of obligatory consultation with the Public Service Commissions [art. 320(4)].

For the scheduled castes, reservation is 15 per cent of the vacancies for which recruitment is made by open competition on an all-India basis and 16-2/3 per cent of the vacancies to which recruitment is made otherwise. For the scheduled tribes, the reservation is 7½ per cent in both cases. Reservations in direct recruitment to Group 'C' and 'D' posts which normally attract candidates from a locality or region, are fixed in proportion to the population of the scheduled castes and tribes in the respective states and union territories.

TABLE 9.3
POPULATION OF SCHEDULED CASTES AND TRIBES (1971 CENSUS)

	Scheduled castes	Scheduled tribes
INDIA	8,24,80,251	4,11,47,922
States		
Andhra Pradesh	58,16,019	22,26,086
Assam	9,12,557	16,06,648
Bihar	83,85,572	49,32,771
Gujarat	18,90,011	37,56,700
Haryana	18,95,933	—
Himachal Pradesh	8,07,608	1,41,647
Jammu and Kashmir	3,81,277	—
Karnataka	42,77,161	2,62,070
Kerala	20,01,549	1,93,132
Madhya Pradesh	57,51,467	98,14,606
Maharashtra	31,77,181	38,40,658
Manipur	16,376	3,34,466
Meghalaya	3,887	8,14,230
Nagaland	—	4,57,602
Orissa	33,07,300	50,75,491
Punjab	33,48,217	—
Rajasthan	42,16,266	31,35,392
Sikkim	9,502	51,643
Tamil Nadu	73,37,876	4,50,473
Tripura	1,92,860	4,50,544
Uttar Pradesh	1,90,95,413	1,98,565
West Bengal	89,00,260	26,02,673
Union Territories		
Andaman and Nicobar Islands	—	18,179
Arunachal Pradesh	339	3,69,408
Chandigarh	29,073	—
Dadra and Nagar Haveli	1,332	64,445
Delhi	6,35,698	—
Goa, Daman and Diu	16,514	7,654
Lakshadweep	—	29,540
Mizoram	82	3,13,299
Pondicherry	72,921	—

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

Reservation is also made at 15 per cent of the vacancies for the scheduled castes and 7½ per cent for the scheduled tribes in promotions on the results of the competitive examinations limited to departmental candidates in Group B, C and D and in promotions by selection in Groups B, C and D and to the lowest rung of Group A in grades or services to which direct recruitment, if any, does not exceed 66-2/3 per cent. Reservation has also been provided for scheduled castes and scheduled tribes in promotion on the basis of seniority subject to fitness in Groups A, B, C and D posts in grades or services to which direct recruitment, if any, does not exceed 66-2/3 per cent.

In promotions by selection within Group 'A' to posts carrying an ultimate salary of Rs. 2,250 p.m. or less, the scheduled castes and tribes officers, who are senior enough in the zone of consideration for promotion and are within the number of vacancies for which the select list has to be drawn, are included in that list provided they are not considered unfit for promotion.

TABLE 9.4
ALLOTMENT OF SEATS IN LEGISLATURES

State/Union territory	Lok Sabha			Vidhan Sabha		
	Total number of seats	Seats reserved for scheduled castes	Seats reserved for scheduled tribes	Total number of seats	Seats reserved for scheduled castes	Seats reserved for scheduled tribes
States						
Andhra Pradesh	42	6	2	294	39	15[1]
Assam	14	1	2	126	8	16
Bihar	54	8	5	324	48	28
Gujarat	26	2	4	182	13	26
Haryana	10	2	—	90	17	—
Himachal Pradesh	4	1	—	68[2]	16	3
Jammu and Kashmir	6	—	—	76	6	—
Karnataka	28	4	—	224	33	2
Kerala	20	2	—	140	13	1
Madhya Pradesh	40	6	9	320	44	75
Maharashtra	48	3	4	288	18	22
Manipur	2	—	1	60	1	19
Meghalaya[3]	2	—	—	60	—	—
Nagaland[3]	1	—	—	60	—	—
Orissa	21	3	5	147	22	34
Punjab	13	3	—	117	29	—
Rajasthan	25	4	3	200	33	24
Sikkim	1	—	—	32	2	—
Tamil Nadu	39	7	—	234	42	3
Tripura	2	—	1	60	1	17
Uttar Pradesh	85	18	—	425	92	1
West Bengal	42	8	2	294	59	17
Union Territories						
Andaman and Nicobar Islands	1	—	—	—	—	—
Arunachal Pradesh[3]	2	—	—	30	—	—
Chandigarh	1	—	—	—	—	—
Dadra and Nagar Haveli	1	—	1	—	—	—
Delhi	7	1	—	56[4]	9	—
Goa, Daman and Diu	2	—	—	30	1	—
Lakshadweep	1	—	1	—	—	—
Mizoram[3]	1	—	—	30	—	—
Pondicherry	1	—	—	30	5	—
Total	542	79	40	3,997	557	303

[1]Four seats are reserved for two autonomous district (North Cachar Hills and Mikir Hills)
[2]Excluding 24 seats in the territory held by Pakistan.
[3]No reservation has been made.
[4]Metropolitan Council.

CC-0. Panjab University Digital Presevation Foundation, Chandigarh

To facilitate their adequate representation, concessions such as, (i) relaxation in age limit, (ii) relaxation in the standard of suitability, (iii) selection, provided they are not found unfit for the posts, (iv) relaxation of the qualification regarding 'experience' in the case of candidates of the secheduled castes and scheduled tribes, wherever necessary and (v) inclusion of scientific and technical posts up to the lowest grade of Group A required for research, in the scheme of reservations, have been provided for. Simultaneously with notification to employment exchanges or advertisements in newspapers, vacancies reserved for scheduled castes and scheduled tribes in Groups C and D (Class III and IV) posts are announced over the stations of All India Radio located in areas having concentration of scheduled castes and scheduled tribe population. Vacancies filled through the union public service commission otherwise than through examination, are advertised on the first occasion as exclusively reserved for scheduled castes/ scheduled tribes and are advertised a second time, if necessary, when other community candidates are also considered, if no scheduled castes/ tribe candidates still become available. Reservations for scheduled castes and scheduled tribes (including vacancies 'carried forward') is generally subject to the ceiling of 50 per cent of the total number of vacancies. This was based on an earlier judgement of the Supreme Court. However, in the light of certain observations made by the Supreme Court in another case, on the rule of 'carry forward' it has now been provided in the orders issued on 27 December 1977 that wherever there is 'carry forward' of unfilled reserved vacancies, there should be no objection to going beyond the limit of 50 per cent of the total vacancies in a year by way of reservation for scheduled castes and scheduled tribes, provided the overall position of representation of scheduled castes and scheduled tribes in the particular grade or service is found to be not adequate. The scheme of reservations is also being followed by the public sector undertakings. The voluntary agencies, which are in receipt of substantial grants-in-aid from the government, are also required, as a condition, to adopt certain specific features of the reservation scheme in their establishments.

To give effect to the reservations, model rosters of 40 points each have been prescribed for recruitment by open competition and otherwise on an all-India basis and 100 point roster for recruitment made on local and regional basis. If the vacancies in a service or cadre are too few for the purpose, all corresponding posts are grouped together in direct recruitment. Annual statements are required to be submitted by the recruiting authorities for scrutiny by the government. For ensuring implementation of the special representation orders, liaison officers have been appointed in different ministries of the union government.

State governments have also framed rules for the reservation of posts for these classes and taken steps to increase their representation in the state services. 25 per cent of the vacancies in the peons cadre have been reserved for being filled in by transfer from sweepers *farashes, chowkidars,* etc., who have put in a minimum of five years service and who may not be possessing the qualifications prescribed for direct recruitment to the post but who may possess elementary literacy and give proof of ability to read either English or Hindi or regional language.

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

The representation of scheduled castes and tribes in central government services and in IAS an IPS as on 1 January 1979 is given in Table 9.5.

TABLE 9.5
SC/ST REPRESENTATION IN CENTRAL GOVERNMENT

Group (Class)	Total No. of employees	Scheduled castes	Percentage	Scheduled tribes	Percentage
A (Class I)	43,193	1,940	4·50	366	0·85
B (Class II)	56,095	3,618	6·44	495	0·88
C (Class III)	17,03,726	2,08,192	12·22	48,731	2·86
D (Class IV) (excluding Sweepers)	12,54,172	2,39,963	19·13	58,461	4.66
Total	30,57,186	4,53,713	14·84	1,08,053	3·53
D (Class IV Sweepers)	96,972	83,171	85·77	1,522	1·56

SC/ST REPRESENTATION IN ALL INDIA SERVICES

Service name	Total No. of employees	Scheduled castes	Percentage	Scheduled tribes	Percentage
IAS	NA	355	NA	160	NA
IPS	NA	207	NA	78	NA

N. A.—Not available.

ADMINISTRATION OF SCHEDULED AND TRIBAL AREAS

Some areas have been 'scheduled' in the states of Andhra Pradesh, Bihar, Gujarat, Himachal Pradesh, Madhya Pradesh, Maharashtra, Orissa and Rajasthan under article 244 and the Fifth Schedule to the Constitution. Governors of the respective states submit a report annually to the President on the administration of the 'scheduled' areas in their states.

The tribal areas in the states of Assam and Meghalaya and the union territory of Mizoram are administered subject to the provisions of the Sixth Schedule to the Constitution. Under the Schedule, they are divided into autonomous districts. There are eight such districts namely, North Cachar Hills and Mikir Hills districts in Assam, United Khasi-Jaintia Hills, Jowai and Garo Hills districts in Meghalaya and Chakma, Lakher and Pawi districts in Mizoram. Each autonomous district has a district council consisting of not more than 30 members of whom not more than four can be nominated and the rest are to be elected on the basis of adult suffrage. The councils are vested with certain administrative, legislative and judicial powers.

WELFARE AND ADVISORY AGENCIES

The union ministry of Home Affairs is responsible for the formulation and implementation of schemes for the welfare of the scheduled castes and scheduled tribes and other backward classes and maintains liaison with the states.

A commission for the scheduled castes and scheduled tribes consisting of a chairman and four members, including the special officer appointed under Article 338 of the Constitution known as the Commissioner for Scheduled Castes and Scheduled Tribes, was set up in August 1978. The commission is to investigate all matters relating to constitutional safeguards, reservation in public services, to study the implementation of the Protection of Civil Rights Act 1955, with particular reference to the objective of removal of untouchability and

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

invidious discrimination arising thereform, and to ascertain the socio-economic and other relevant circumstances responsible for the commission of offences against persons belonging to scheduled castes and tribes with a view to recommend appropriate remedial measures.

Parliamentary Committees

The Government of India set up three parliamentary committees, the first in 1968, the second in 1971 and the third in 1973, to examine the implementation of the Constitutional safeguards for the welfare of the scheduled castes and scheduled tribes. The committee has since been constituted as a standing committee of Parliament, the tenure of the members being one year. This committee consists of thirty members, twenty from the Lok Sabha and ten from Rajya Sabha.

Welfare Departments in States

The state governments and union territory administrations have separate departments to look after the welfare of the scheduled castes and scheduled tribes and other backward classes. The administrative set-up varies from state to state. In Bihar, Madhya Pradesh and Orissa, separate ministers have been appointed to look after tribal welfare as prescribed in article 164 of the Constitution. Some other states have set up committees of members of state legislatures on the pattern of the parliamentary committee at the centre.

Voluntary Organisations

A number of voluntary organisations also promote the welfare of the scheduled castes and scheduled tribes. Important organisations of all-India character are : Harijan Sewak Sangh, Delhi; Bharatiya Depressed Class League, New Delhi; Iswar Saran Ashram, Allahabad; Indian Red Cross Society, New Delhi; Hind Sweepers Sewak Sangh, New Delhi and Ramakrishna Mission, Narendrapur, West Bengal; Bharatiya Adimajati Sewak Sangh, New Delhi; Andhra Rashtra Adimajati Sewak Sangh, Nellore; Ramakrishna Mission, Cherrapunji, Ranchi, Puri, Silchar, and Shillong; Thakkar Bapa Ashram, Nimakhandi, (Orissa) and the Servants of India Society; Pune.

The Government of India provides grants to non-official voluntary organisations for specific schemes for the welfare of backward classes. During 1978-79 a provision of Rs 80.00 lakhs was earmarked for these organisations.

WELFARE SCHEMES Expenditure during the Plans

The welfare of scheduled castes and scheduled tribes is given special attention by both the central and state governments. Special programmes for their welfare have been undertaken in the successive five year plans and the size of investment on these special programmes has been increasing from plan to plan as shown in table 9.6 :

TABLE 9.6 EXPENDITURE DURING THE PLANS

(Rs crores)

	Period	Expenditure
First	1951-56	30.04
Second	1956-61	79.41
Third	1961-66	100.40
Annual Plans	1966-69	68.50
Fourth	1969-74	172.70
Fifth Plan (outlay)	1974-78	288.88
Special central assistance for sub-plans for tribal areas		120.00

In addition, state governments have also been spending a sizable amount from their non-plan budgets on the welfare of these classes.

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

New Strategy

In the Fifth Plan, a new strategy was adopted for the uplift of the scheduled castes and scheduled tribes. Greater emphasis was placed on the role of the general sector for providing a major thrust to the development of backward classes. Programmes in the backward classes sector were of a catalytic nature and supplemental to the general sector programmes.

Many states have set up scheduled castes development corporations for giving necessary support for the economic development of the scheduled castes without assuming direct operational responsibilities. The specific problems of the scheduled castes, which have been largely bypassed by the general sector programmes, are expected to be tackled effectively in this way.

Tribal Development

In the Fifth Plan a new strategy for tribal development was evolved. According to the strategy areas having 50 or more per cent of tribal concentration were delineated and tribal sub-plans prepared in 18 states and union territories namely, Andhra Pradesh, Assam, Bihar, Gujarat, Himachal Pradesh, Karnataka, Kerala, Madhya Pradesh, Maharashtra, Manipur, Orissa, Rajasthan, Tamil Nadu, Tripura, Uttar Pradesh, West Bengal, Andaman and Nicobar Islands and Goa, Daman and Diu. The states and union territories with predominant tribal population, namely, Arunachal Pradesh, Meghalaya, Mizoram, Nagaland and Lakshadweep and Dadra and Nagar Haveli were not included in the tribal sub-plan approach as their state plans are, in fact, plans for the development of the tribal people.

The broad objectives of the tribal sub-plan are (i) to narrow the gap between the levels of development of tribal areas and other areas; and (ii) to improve the quality of life of the tribal communities.

In order to achieve these objectives, elimination of all forms of exploitation of tribals particularly in land, money-lending, malpractices in the exchange of agricultural and forest produce was given high priority. The tribal sub-plans envisaged total physical and financial efforts for integrated development of the tribal areas. The investments in the sub-plan areas flow from state plan, central outlays from central ministries and departments, institutional finance and special central assistance. During the Fifth Five Year Plan (1974-1978) the outlay under special central assistance was Rs 120.00 crores. During the Sixth Plan 1978-83, the outlay for special central assistance has been kept at Rs 500.00 crores.

The tribal sub-plan areas in the 18 states and union territories are grouped into 180 Integrated Tribal Development Projects as operational units. During the Sixth Plan, tribal majority pockets which have a total population of 10,000 and 50 per cent or more of tribal population are also to be taken up under the Modified Area Development Approach as a part of the tribal sub-plan strategy. The concept of tribal sub-plan itself has been kept flexible and has been adopted to the local situation. Programmes undertaken include, agriculture and allied sectors, irrigation, marketing and cooperation, education, etc. The most backward groups among the tribal primitive tribes are given special attention by preparing separate plans for them.

Plan Programmes

The Plan programmes for the welfare of backward classes fall into three main groups : centrally-operated, centrally-sponsored and state sector. Important schemes being implemented under these categories are briefly described below.

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

Central Schemes Training and Coaching Centres

With a view to helping the scheduled castes and scheduled tribes to secure employment, two schemes, namely, pre-examination training centres and coaching-*cum*-guidance centres, have been started. Under the first scheme, there are seven centres located at Allahabad, Delhi (through a private coaching centre), Jaipur, Madras, Patiala, Hyderabad and Shillong which impart coaching to scheduled castes and scheduled tribes for all-India services examinations conducted by the union public service commission. Centres for imparting training to candidates for state services examinations have also been set up in the States of Andhra Pradesh, Bihar, Gujarat, Haryana, Karnataka, Kerala, Madhya Pradesh, Orissa, Uttar Pradesh, West Bengal and union territory of Delhi. Two centres for imparting coaching for engineering service examinations have also been set up at Allahabad and Tiruchirapalli.

Four coaching-*cum*-guidance centres, one each at the employment exchanges in Delhi, Kanpur, Jabalpur and Madras have been set up to conduct courses of 'confidence building and interview techniques' for the scheduled caste and scheduled tribe applicants on the live registers of the concerned employment exchanges for Group "C" posts.

Post-Matric Scholarships

Post-matric scholarships to scheduled castes and tribes are awarded subject to a limit on their guardian's income. The rates of maintenance allowance for medical and engineering degree student hostellers have been increased by Rs 60 per month from January 1978. Book banks have also been started from the academic year 1978-79 for the same category of students.

Girls Hostels for the Scheduled Castes and Tribes

Under the scheme, financial assistance is given to state and union territory governments for the construction of new hostels and to expand existing ones at any place where the facilities for girls belonging to these classes are inadequate. A sum of Rs 1.96 crore was spent on the scheme during the Fourth Plan. An amount of Rs 3.77 crore was allocated during the Fifth Plan. A provision of Rs 1.45 crore had been made for 1979-80.

Tribal Research Institutes

There are at present 11 Tribal Research Institutes in the country. To co-ordinate their activities, a 30-member Central Research Advisory Council has been set up. The Council provides guidance on policy formulation and serves as a clearing house for the Institutes, central and state governments and other research organisations connected with tribal problems.

Overseas Scholarships

Scholarships to deserving scheduled castes and scheduled tribes students for studies in foreign countries are being awarded by the union government since 1955. The number of such scholarships every year is 10 for scheduled castes, six for scheduled tribes, one for denotified nomadic and semi-nomadic tribes and three for other backward classes and one neo-Buddhist. Tourist class air passage is provided to students who receive foreign scholarships from other sources without travel grants.

State Sector Schemes

The state sector programme for which central assistance is given in the shape of block grants and loans can be divided into three main groups, namely, education, economic uplift and health, housing and other schemes. The particulars of the schemes are :

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

Education

(i) Pre-matric scholarships and stipends
(ii) Exemption from tuition and examination fees
(iii) Provision of educational equipments
(iv) Provision of mid-day meals
(v) Setting up of Ashram schools (basic type residential schools)
(vi) Grants for the construction of school and hostel buildings

(i) Provision of land and irrigation
(ii) Supply of bullocks, agricultural implements, seeds and manure
(iii) Development of cottage industries
(iv) Development of communications
(v) Co-operation
(vi) Colonisation of shifting cultivators
(vii) Supply of poultry, sheep, pigs and goats

Health, Housing and other Schemes

(i) Medical facilities
(ii) Drinking water supply
(iii) Provision of houses and house-sites
(iv) Provision of legal aid
(v) Grants to non-official agencies working at state level.

RELIEF AND REHABILITATION

Resettlement of Displaced Persons from Chhamb

About 3,900 families who had been displaced from Chhamb-Niabat in 1971 as a result of Indo-Pak conflict, and staying in the camps at Kishanpur-Manwal, had all been moved to resettlement sites by 30 September 1979. The work of resettling the displaced persons on land or in business is in progress.

Resettlement of Displaced Persons who crossed over to India during 1971 conflict.

Out of large number of persons who had crossed over from Pakistan to Rajasthan and Gujarat in 1971 in the wake of Indo-Pak conflict, about 53,000 (45,000 in Rajasthan and 8,000 in Gujarat) were staying in relief camps and granted relief assistance by the government. There was no prospect of return of these displaced persons to Pakistan and hence it was decided by the Government of India to rehabilitate them on a permanent basis with grant of Indian citizenship. For the settlement of 45,000 displaced persons in Rajasthan, schemes have been sanctioned at an estimated cost of Rs 11.73 crores on agriculture-based occupations. Another scheme has been sanctioned at an estimated cost of Rs 1.23 crores for the resettlement of 8,000 displaced persons in Gujarat on agriculture. So far about 4,300 families have been settled in Rajasthan and 1,075 families in Gujarat.

At present, there are about 6,000 families of migrants from erstwhile East Pakistan (now Bangladesh) awaiting settlement. About 4,350 families out of them are proposed to be settled in the Dandakaranya project during 1980-81. During 1979-80, about 9,000 families of deserter returnees were provided with renewed financial assistance including bullocks, fertilizers, seeds, etc., besides settling 207 fresh families of settlers. Of the two major irrigation projects under execution by the Dandakaranya Project, one, *namely*, Paralkote Dam Project is expected to be completed by the next year while the second one,

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

namely, Satiguda Dam Project, which is expected to be completed by June 1982, has also started providing water for irrigation. In addition, the *Potteru* Irrigation Project is being financed by the central government and is being executed by the government of Orissa in order to provide irrigation facilities in a command area of 1,50,000 acres. All the remaining families at present awaiting rehabilitation in *Karmi shibirs* camps are expected to be settled within the command of the *Potteru* Project. This Project is estimated to cost Rs 48.63 crore.

Repatriates from Sri Lanka

Under the Indo-Sri Lanka Agreements of 1964 and 1974 the Government of India agreed to grant Indian citizenship and repatriate six lakh persons of Indian origin together with the natural increase in that number over a period of 17 years. So far about 3.30 lakh persons have arrived in India from Sri Lanka. Their resettlement has been confined to four southern states. Nearly 90 per cent repatriates are from plantations. Priority in their resettlement is being accorded to schemes relating to plantations and agriculture. In view of the growing magnitude of the problem, a national strategy in various development schemes of both the centre and states is being evolved. Efforts are being made in consultation with state governments and central undertakings for enlargement of employment scope under various schemes. The Repartriates' cooperative finance and development bank makes available finance for economic programmes of production, trade and business undertaken by the repatriates.

Prime Minister's National Relief Fund

The Prime Minister's National Relief Fund was started in 1947. Up to the end of March 1980 public contributions to the fund amounted to about Rs 39.86 crore. Over Rs 20.71 crore were utilised in providing relief to people affected by natural calamities such as earthquakes, floods, cyclones, droughts, famines and fire. Relief was also given in the early stages to displaced persons from Pakistan.

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

10 MASS COMMUNICATION

The term mass communication stands for dissemination of information, ideas and entertainment by the use of communication media. The media include those which use modern means of communication such as radio and television, film, the press, publications and advertising. In fact they co-exist with important traditional media such as folk dance, drama and puppetry. In India, the Ministry of Information and Broadcasting has a large set-up of mass communication, with the regional and branch offices as well as mobile units, spread all over the country.

RADIO

Radio broadcasts started in India in 1927 with two privately-owned transmitters at Bombay and Calcutta. The Government of India took them over in 1930 and started operating them under the name of Indian Broadcasting Service. In 1936, the name of the service was changed to All India Radio (AIR)—since 1957, it is known as Akashvani—and it was made a separate department. AIR is now the biggest media organisation of the Ministry of Information and Broadcasting and its programmes are received by over 2.00 crore radio receiver sets in India. It is serving as an effective medium not only to inform and educate people but also to provide healthy entertainment. It is also helping to create a climate of opinion in which social change can take place and people could be involved in the process.

TABLE 10·1
NUMBER OF BROADCAST RECEIVER LICENCES (RADIO)

Name of Circle	Number of licences[1]
Andhra Pradesh	15,44,711
Bihar	6,29,211
Delhi	7,34,122
Gujarat	16,07,574
Jammu and Kashmir	1,58,648
Kerala	11,23,680
Karnataka	13,49,708
Maharashtra	27,32,035
Madhya Pradesh	9,31,545
North East	2,83,472
North West	16,41,583
Orissa	2,63,515
Rajasthan	7,55,020
Tamil Nadu	22,95,643
Uttar Pradesh	18,10,219
West Bengal	16,54,434
Army Postal Service	96,324
TOTAL	1,96,11,444

[1] As on 31 December 1978.

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

Broadcasting Network and Programme Composition

All India Radio's network consisted of six radio stations at the time of Independence in 1947. Now there are 84 stations[1] including two Vividh Bharati/commercial centres, one at Chandigarh and the other at Kanpur. In addition, there are two auxiliary studio centres at Bhubaneshwar and Santiniketan. These cover all the important cultural and linguistic regions of the country. AIR's 'home service' programmes are transmitted for 3.67 lakh hours every year, excluding 1.44 lakh hours of Vividh Bharati programmes. The programmes which are beamed from 157 transmitters, of which 124 are medium wave, cover 77.6 per cent of the geographical area and 89.35 per cent of the population of the country. In addition, there are also 'external service' transmissions, which present programmes in 17 foreign languages and eight Indian languages for about 56 hours daily to present India's viewpoint on important issues to listeners abroad and project the cultural heritage of the country, its art, literature, music and socio-economic advance under the five year plans.

In the 'home-service' programmes, 38 per cent of the broadcasting time is claimed by music and 24 per cent by news, 11 per cent by talks and discussions, followed by 5.6 per cent for rural programmes. The principal ingredients of 'home service' programmes and their duration are given in table 10.2.

TABLE 10·2 COMPOSITION AND DURATION OF HOME SERVICE PROGRAMMES (1978)

Type of Programme	Duration		Approximate Per centage
	Hrs.	Mts.	
Classical music	47,819	46	13·0
Folk music	13,274	09	3·6
Light music	30,778	44	8·4
Devotional music	17,291	25	4·7
Film music	24,086	36	6·6
Western music	6,130	00	1·7
News	88,310	15	24·0
Spokenword (talks, discussions, etc.)	41,369	35	11·3
Drama	13,153	05	3·6
Rural	20,571	14	5·6
Tribal	6,058	54	1·6
Children	4,200	03	1·1
Women	5,368	05	1.5
Industrial	4,870	02	1·3
Armed forces	4,655	16	1·3
Other (language) programmes	18,490	15	5·0
Educational	11,996	13	3·3
Publicity (announcements)	8,305	09	2·3
Religious	542	27	0.1
TOTAL	3,67,272	07	100·0
Vividh Bharati Programmes	1,44,317	43	
GRAND TOTAL	5,11,589	50	

[1]The 84 radio stations as on 31 December 1979 grouped into four zones, are the following : *North zone* : Ajmer, Allahabad, Bikaner, Chandigarh, Delhi, Gorakhpur, Jaipur, Jammu, Jodhpur, Jullundur, Kanpur, Leh, Lucknow, Mathura, Najibabad, Rampur, Rohtak, Simla, Srinagar, Udaipur and Varanasi; *East zone* : Agartala, Aizawl, Bhagalpur, Calcutta, Cuttack, Darbhanga, Dibrugarh, Gauhati, Imphal, Leypore, Kohima, Kurseong, Ranchi, Pasighat, Patna, Sambalpur, Shillong, Silchar, Siliguri, Tawang and Tezu; *West zone* : Ahmedabad, Ambikapur, Aurangabad, Bhopal, Bhuj, Bombay, Chhatarpur, Gwalior, Indore, Jabalpur, Jagdalpur, Jalgaon, Nagpur, Panaji, Porbhani, Pune, Raipur, Rajkot, Ratnagiri, Rewa, Sangli and Vadodara; and *South zone* : Alleppey, Bangalore, Bhadravati, Calicut, Coimbatore, Cuddapah, Dharwar, Gulbarga, Hyderabad, Madras, Mysore, Mangalore, Pondicherry, Port Blair, Tiruchirapalli, Tirunelveli, Trichur, Trivandrum, Vijayawada and Visakhapatnam.

CC-0. Mumnigam Digital Presevation Foundation, Chandigarh

Music

Programmes of music are broadcast from all stations of AIR and consist of classical, light classical, light, folk, tribal and film music. A number of stations also broadcast western music. On an average around 38 per cent of the total broadcasting time is devoted to music. Classical music which was largely a preserve of some 'gharanas' and princely courts in the pre-broadcasting period, has now become popular through AIR programmes. A lot of interest has been created in forms and styles of India's ancient musical traditions.

Classical music programmes include a weekly national programme of music (started in 1952) which presents to a nation-wide audience the leading exponents of both Hindustani and Karnatak systems of music. A festival of music, known as Radio Sangeet Sammelan, is also organised every year. Renowned artistes of both vocal and instrumental music, participate in the concerts which are held before an invited audience, at selected places in different parts of the country. The recording of these concerts are broadcast on AIR network. The Sammelan is preceded by a music competition with the objective of discovering new talent from among musicians in the 16-24 age group. In all 20 concerts were held during the Radio Sangeet Sammelan 1979. In April 1974 a programme of classical light music by young musicians was started. It consists of concerts in Hindustani music which are broadcast from Delhi every Tuesday and are relayed by other stations of northern India, while concerts of Karnatak music are broadcast from Madras every Friday and are relayed by other stations of southern India. The aim of this programme of classical music is to discover and encourage young talent.

A national programme of regional music, which brings to the listeners the rich tradition of folk and light music of the various regions of the country, was started in January 1973. The programme is broadcast on the first Thursday of every month from Delhi and is relayed by all other stations of AIR.

The national orchestra, known as Vadya Vrinda, consisting of both Hindustani and Karnatak instrumentalists was started in 1952 at the Delhi station, and a sizeable repertoire of compositions based on traditional ragas and folk tunes has been built up and more compositions are added to it every year. The experiment has proved beyond doubt that orchestration of Indian music has interesting possibilities. To enlarge the horizon another orchestral unit devoted exclusively for Karnatak style ragas has been set up at Madras station.

In order to revive community singing and to inculcate a sense of integration among the masses, choral groups have been set up at selected stations like Delhi, Bombay, Calcutta, Lucknow, Madras, Patna, Pune and Trivandrum for producing choral songs on patriotic and national integration themes. These songs, intended to promote national integration are regularly broadcast from all stations of AIR. Apart from these, light music units located at various AIR stations produce high quality light music songs for broadcast.

Western music is broadcast by a number of AIR stations and the transcription and programme exchange unit brings to the Indian listeners excerpts from the performing arts from many parts of the world.

Plays and Features

Each station broadcasts at least two plays every week. Besides original plays, radio adaptation of outstanding stage plays, novels and short stories are also broadcast. Outstanding plays from Indian

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

languages are broadcast on the fourth Thursday of every month in the national programme of plays, started in 1956. A series of monthly chain-plays is also broadcast. Under this, 12 model-plays are produced in a year and circulated amongst 18 major stations. In addition, humorous plays/skits are also broadcast on the entire net work of Vividh Bharati.

The national programme of features, started in 1956, focusses attention on matters of national importance or interest—in the political, economic, social or cultural spheres. The original script of these may be in English or Hindi, but is invariably translated into regional languages and is broadcast from all the regional stations.

News and Current Affairs

The News Services Division of AIR attempts comprehensive and speedy coverage of news and views through its news bulletins, commentaries and discussions on current affairs. Besides noticing major trends in political, economic, social, cultural and scientific fields, it gives adequate attention to parliamentary proceedings, rural development and sports activities. News is broadcast daily through 242 bulletins in 37 languages and 34 local dialects. Of these, 68 bulletins are beamed in the 'home service' from Delhi and relayed by other AIR stations; 111 regional bulletins are broadcast from 34 regional stations and 63 bulletins are beamed to listeners abroad. The regional bulletins were introduced in April 1953. In addition, specialised news bulletins carrying world news, sports news and state and development news and slow speed bulletins in English, Hindi and Urdu are also broadcast. A weekly news bulletin of "human-interest stories" in Hindi and other Indian languages and a daily press round up in English and Hindi were started in 1977. A special bulletin for persons going on Haj pilgrimage is also broadcast.

When Parliament is in session, daily commentaries in English as well as in Hindi review the day's proceedings in the Houses. Weekly commentaries, in English and in Hindi, of Parliamentary proceedings were introduced in 1977. Daily and weekly reviews of State Legislatures are broadcast from State Capitals in the languages concerned. Commentaries by specialists in various fields and scripts from AIR's correspondents are broadcast in English, Hindi and Urdu in the programmes called 'Spotlight', 'Samayiki' and 'Tabsara' respectively. In the 'current affairs' programme every Sunday, specialists take up live issues for in depth discussion. Eye-witness accounts, interviews with important persons and reactions of the common man to the happenings around him are presented through radio newsreels in both English and Hindi.

A major part of the news broadcast by AIR comes from its own correspondents. AIR has a corps of 340 correspondents in India and abroad. The news broadcasts from AIR cover over 33 hours daily.

External Services

The external services broadcasts aim to project a true and objective image of the country to listeners abroad and to explain the country's point of view on matters of national and international importance. This is done through daily commentary, press review and news bulletins. The news bulletins are broadcast in all the language services, and the commentary and press review in most of them. These broadcasts also try to acquaint foreign listeners with the working of the democratic system in India and to stimulate interest abroad in the rich heritage of

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

our art, culture and traditions. The programmes highlight the progress that is being achieved in the industrial, economic and social fields. This is being done in 25 languages–17 foreign and 8 Indian–for over 56 hours daily reaching listeners in the widely scattered areas of the world.

Vividh Bharati and Commercial Service

Popular entertainment programme, known as Vividh Bharati, is broadcast from 31 centres, including two short wave transmitters at Bombay and Madras, for a total duration of 12 hours and 45 minutes on weekdays and 13 hours and 15 minutes on Sundays and holidays. Film music, humorous skits, short plays and features are presented in these programmes.

Commercial advertising on the radio introduced on 1 November 1967 from Bombay-Nagpur-Pune on an experimental basis, was gradually extended to Calcutta (1968); Delhi and Madras-Tiruchirapalli (1969); Chandigarh-Jullundur, Bangalore-Dharwar, Ahmedabad-Rajkot, Kanpur-Lucknow-Allahabad (1970); Hyderabad-Vijayawada (1971) and Bhopal-Indore, Cuttack, Jaipur-Jodhpur, Patna-Ranchi, Trivandrum, Calicut and Srinagar (1975), Advertisements are accepted in any language as tape-recorded 'spots' of 7,15,30 and 60 seconds duration. Sponsored programmes were introduced in May 1970. In 1978-79, the commercial service earned a gross revenue of Rs 8.70 crores.

Programmes for Special Audiences

The programmes for special audiences and occasions include those for the Armed Forces, women and children, the youth, students, rural and tribal people and industrial workers. Fourteen stations broadcast daily programmes for the Armed Forces, while 42 stations present programmes twice or thrice a week in regional languages for women with the objective of providing entertainment and imparting information on household topics.

Family welfare programmes are planned and produced by 22 full-fledged family welfare units at various stations of AIR. Fourteen other stations have Field Reporters who look after the planning and production of these programmes. Almost all the stations broadcast family welfare and health programmes in a general way. These programmes are integrated with the general programmes as well as those meant for special audience like rural, women, youth and industrial workers.

Almost all AIR stations broadcast programmes specially for rural listeners for about 30 to 75 minutes every day. In addition, a daily programme on hard-core agriculture is broadcast for 45 to 55 minutes from 49 farm and home units located in different stations. AIR stations also broadcast weather bulletins everyday for the farming community. Twenty stations broadcast a special programme called the 'Farm School on the Air' where instructions and guidance on farming is provided to listeners.

Programmes consisting of both music and spoken word are put out in more than 100 tribal dialects for the Adivasis from various stations.

Special occasions like the Republic Day, Independence Day, visits of foreign dignitaries or the visits of Indian dignitaries abroad and anniversaries are extensively noticed by presenting special programmes on the national hook-up of AIR.

CC-0. Anamnagar Digital Preservation Foundation, Chandigarh

'Yuva Vani', Sports and School Broadcasts

Programmes for the youth in Yuva Vani are broadcast from 22 stations of AIR. This service provides a forum to the youth between the ages of 15 and 30 years, to present their viewpoint by participating in a wide range of programmes—talks, discussions, interviews, plays, features and music. A youth news bulletin is also broadcast by the youth themselves. In addition, 33 stations broadcast programmes of varying duration and frequency in different languages for the youth.

For students in school most of the AIR stations broadcast programmes based on the school curriculum to reach students in the interior areas. There are about 62,000 schools equipped with radio sets in the country. Broadcasts for post-school learners are beamed from 25 stations as part of youth broadcasts, once or twice a week as the case may be. Radio support to University correspondence degree courses is also provided by several stations.

Sports events in India and abroad are covered by reviews, running commentaries and voice despatches. Four metropolitan centres of Bombay, Calcutta, Delhi and Madras present a daily sports service of 95 minutes that covers all the important sports events. Besides, two news bulletins, one in English and the other in Hindi, of 5 minutes duration, are broadcast. A 10-minutes sports newsreel is broadcast every Monday.

Audience Research

The audience research unit undertakes regular surveys and analyses of listeners' reactions to various types of programmes broadcast on the AIR and Doordarshan network. It provides data for determining the rates of 'spots' and sponsored programmes in the commercial service and also surveys the reception quality of various stations. It also undertakes feed forward surveys to provide basic information about the audience and the potential for programme coverage when a new AIR station or TV centre is started. Lately, it has undertaken surveys to assess the impect of election broadcasts by political parties in a number of centres throughout the country.

Transcription and Programme Exchange

The transcription and programme exchange service of AIR helps different stations to receive and exchange outstanding programmes, transcribes the speeches of eminent personalities and maintains the Library of Sound Archives.

The Archives Library, set up in 1954, collects and preserves on a permanent basis the recorded speeches of the President, Vice-President and Prime Minister. Voice recordings of several other eminent Indian and foreign personalities are also preserved.

The most valuable possession of the archives consists of over 51 hours of recorded prayer speeches of Gandhiji and over a hundred hours of recordings of reminiscences of Mahatma Gandhi by eminent persons. The library has nearly 24,000 tapes on stock with about 3,000 tape recordings of Jawaharlal Nehru's speeches.

Among other valuable items preserved are (i) recitations from the Vedas in Sanskrit in the traditional style; (ii) poetry recitations by eminent poets in Hindi and other languages; (iii) recitals by old masters of music, both Hindustani and Karnatak; (iv) selected items, of music by eminent musicians representing different gharanas; (v) representative pieces of folk music, devotional music and stage songs; and (vi) recordings of freedom fighters.

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

Over 2,000 hours of music of great masters—both Hindustani and Karnatak and folk and regional music—have been preserved so far and 200 hours of music are added to it every year.

Extensive use of archival material is being made by AIR for preparation of different categories of National Programmes. The Delhi Station of AIR has been broadcasting since April 1974, a weekly programme entitled 'Chayan' for one hour on Sundays based on recordings available in the archives. The National Council of Educational Research and Training (NCERT) has since 1976, prepared a number of taped programmes based on the archival material for use by higher age group of students in schools. These programmes are also being utilised by AIR stations.

Over 5,000 verbatim transcripts of speeches of Prime Ministers and Presidents of India are preserved in the archives in bound volumes.

The programme exchange unit of this service circulates recordings and scripts received from AIR stations and foreign-broadcasting organisations. All National Programmes–music, Plays, features, talks/interviews and discussions-are circulated among the stations. Contributions from about 50 foreign broadcasting organisations are received, processed and circulated to AIR stations.

Programme Journals

All India Radio brings out eight programme journals. These are : Akashvani (English), Akashvani (Hindi), and Awaz (Urdu) published from Delhi; Betar Jagat (Bengali) and Akashi (Assamese) published from Calcutta; Vanoli (Tamil) from Madras; Vani (Telugu) from Vijayawada and Nabhovani (Gujarati) from Ahmedabad. Akashvani (English) is a weekly, while others are fortnightlies. The External Services Division of AIR also brings out quarterly programme folders intended for the overseas listeners, one each in Arabic, Burmese, Chinese, French, Indonesian, Nepali, Persian, Pushtu, Swahili and Tibetan. The journal in English, 'India Calling', is a monthly.

DOORDARSHAN

Television set-up in India was delinked from All India Radio on 1 April 1976 and given the name 'Doordarshan'. The creation of Doordarshan as a separate department is meant for fuller development of the medium and specialised skills peculiar to television.

The first television centre in India was set up in Delhi on an experimental basis in September 1959. The programmes were meant for schools and rural areas. Community viewing centres known as 'Tele-clubs' were established for viewers. The first General Service on a regular basis started from Delhi in August 1965.

At present, there are eight TV centres in the country located at Delhi, Bombay, Calcutta, Madras, Srinagar, Jullundur, Amritsar, and Lucknow. There are three relay centres–one at Pune to relay Bombay programmes, the second at Mussoorie to relay Delhi programmes and the third at Kanpur to relay Lucknow programmes. Apart from these, seven transmitters have been functioning at Gulbarga, Hyderabad, Jaipur, Muzaffarpur, Raipur Sambalpur and Ahmedabad (Pij), for providing terrestrial TV service under the SITE on-going plans. Some facts about TV stations, relay centres and SITE on-going transmitters are given in table 10.3.

TABLE 10·3

COVERAGE OF DOORDARSHAN CENTRES

(As on 1 August 1979)

Sl. No.	Name of Centre	Power of trans-mitter (kw.)	Band/ Channel of Operation	Height of Tower/ Mast (metre)	Service Range (kms.)	Area covered (Sq. kms)	Population covered (in lakhs)			No. of villages covered	Date of commissio-ning
							Urban	Rural	Total		
A. Existing Centres											
1.	Delhi	10	I/CH. 4	100	68	14,300	67·5	25·5	93	2,523	15-9-59
2.	Bombay	10	I/CH. 4	300	70 to 100	10,000	65	20	85	2,500	2-10-72
3.	Srinagar	10	I/CH. 4	122	30 to 70	4,000	5	20	25	2,600	26-1-73
4.	Amritsar	10	III/CH. 7	100	65	8,400	6	14	20	1,600	29-9-73
5.	Pune	0·6	III/CH. 5	100	52 to 90	15,000	14	26	40	1,400	2-10-73
6.	Calcutta (Pt. Tower)	10	I/CH. 4	175	75	17,000	73	87	160	7,500	9-8-75
7.	Madras	10	I/CH. 4	175	80	12,000	36	25	61	2,100	15-8-75
8.	Lucknow (Interim Set up)	10	I/CH. 4	100	60	11,300	9	46	55	5,000	27-11-75
9.	Mussoorie	10	III/CH. 10	91	165	29,200	19	93	112	9,700	12-8-77
10.	Kanpur	10	III/CH. 5	150	75	9,500	13	27	40	2,700	12-1-79
11.	Jullundur (Interim set up)	1	III/CH. 9	35	25	2,000	2·7	6·8	9·5	830	13-4-79
B. Site on-going Transmitters											
12.	Pij	1	III/CH. 7	100	40	5,000	2·9	13·7	16·6	700	1-8-76
13.	Jaipur	10	III/CH. 5	100	90	25,400	8·3	26·7	35	4,400	1-3-77
14.	Raipur	1	III/CH. 5	100	40	5,000	5	6·5	11·5	400	10-5-77
15.	Gulbarga	1	III/CH. 7	100	40	5,000	2	4	6	300	3-9-77
16.	Hyderabad	10	I/CH. 4	150	75	17,000	19	19	38	1,600	23-10-77
17.	Sambalpur	1	III/CH. 7	100	40	5,000	1·3	4·2	5·5	650	30-4-78
18.	Muzaffarpur	1	III/CH. 6	100	40	5,000	1.8	17.2	19	1,600	14-6-78
Total existing coverage						2,00,100	350·5	481·6	832·1	48,103	
C. Permanent Set Up											
(to be set up at existing centres)											
1.	Jullundur	10	III/CH. 9	200	80	14,000	13	42	55	4,600	—
2.	Lucknow	10	I/CH. 4	175	75	17,700	11	61	72	7,500	—
3.	Delhi	2x10	I/CH.4	200	90	25,400	69	60	129	5,180	—

MASS COMMUNICATION
CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

On-going SITE

Satellite Instructional Television Experiment (SITE) which began on 1 August 1975 and described as the biggest communication experiment of its kind ended successfully on 31 July 1976. The satellite was made available for beaming instructional programmes in four languages for four hours daily for a year. Abour 2,400 villages in the six states of Rajasthan, Madhya Pradesh, Orissa, Bihar, Andhra Pradesh and Karnataka, where special TV sets were provided, benefited from these programmes.

In view of the success of SITE, the government decided to provide a terrestrial TV service specially to those villages in the area covered by SITE. Accordingly a plan was embarked under which a chain of transmitters were installed at Gulbarga, Hyderabad, Jaipur, Muzaffarpur, Raipur and Sambalpur. In addition, a low power transmitter set up at Pij by the ISRO was also taken over by Doordarshan as part of SITE continuity and this is serving the Kheda area of Gujarat. These transmitters commissioned in 1977-78, cover a total of 9,560 villages in the aforesaid states including 1,014 villages covered earlier by the SITE programmes.

Programming

The main objective of television continues to be to aid the socio-economic development of the country and to impart special education in a variety of ways. The programmes are planned and produced in such a way that both the urban and rural viewers benefit by the various services provided by the medium. The attempt is to make these programmes objective, educative and entertaining.

School Telecast

At present, educational programmes for school students are telecast by Delhi, Bombay, Srinagar and Madras Doordarshan centres. In addition, from the transmitters located at Jaipur, Raipur and Muzaffarpur programmes for schools are being telecast for a duration of 30 minutes on school days. Educational TV lessons from Delhi are planned and presented in close cooperation and in consultation with the concerned educational authorities. Sixteen programmes per week in various subjects are telecast by this centre. Doordarshan Bombay Telecast two lessons of 20 minutes duration each on three days a week. Doordarshan Srinagar and Madras telecast two lessons of 20 minutes each twice a week.

Commercial Telecast

Commercials on Doordarshan, introduced from 1 January 1976, are now being telecast from seven centres namely, Bombay-Pune, Delhi-Mussoorie, Madras, Calcutta, Lucknow–Kanpur, Amritsar and Srinagar. Advertisements are booked in the form of static and movie spots and also by sponsoring the programmes produced and put out by Doordarshan. Ten per cent of the total transmission time is made available for commercial telecasts. The revenue earned through commercials is expected to reach Rs 6.00 crores during 1979-80.

Community viewing

In order to ensure that the television programmes are viewed by a large number of people, television sets have been made available by the government at selected community centres and in schools. These sets are maintained by Doordarshan and the concerned administrative authorities. At present, there are 1,333 community viewing sets located in schools, Tele-clubs and villages in and around Delhi. Srinagar has 550 sets. Doordarshan has made available 1,040 community

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

viewing sets to the various state governments where its centres are located. The state governments are also providing community viewing sets on their own. Doordarshan has taken over 2,330 community sets from the Indian Space Research Organisation for distribution within the service range of the SITE on-going transmitters. The government of Gujarat and Amul Dairy have provided 600 community viewing sets at Pij in Ahmedabad.

Engineering

At present there are eight TV stations, three relay centres and seven SITE on-going transmitters in operation in the country. Television coverage is now available to about 832 lakhs of population spread over an area of about 2,00,000 sq kms. The urban population covered is 350.5 lakhs and rural 481.6 lakhs. Doordarshan covers 6.1 per cent of the area and 15.2 per cent of the population of India.

A permanent set up at Jullundur and a permanent TV tower at Lucknow are under installation. A central master switching room has been set up at Delhi TV centre with the ultimate object of linking various TV stations through coaxial and microwave networks.

TABLE 10.4
NUMBER OF BROADCAST RECEIVER LICENCES (TELEVISION)

Name of circle	Number of licences[1]
Andhra Pradesh	9,120
Bihar	964
Delhi	2,52,635
Gujarat	5,120
Jammu and Kashmir	9,163
Kerala	58
Karnataka	115
Maharashtra	2,90,778
Madhya Pradesh	1,527
North East	31
North West	1,16,896
Orissa	434
Rajasthan	15,137
Tamil Nadu	44,917
Uttar Pradesh	89,975
West Bengal	61,012
Army Postal Service	1,235
TOTAL	8,99,123

[1]As on 31 December 1978.

THE PRESS

The Registrar of Newspapers for India, appointed under the provisions of the Press and Registration of Books (Amendment) Act, 1955, prepares an annual report on the press, which is presented to Parliament. The Registrar also allots newsprint and recommends import of printing machinery for newspapers.

The number of newspapers stood at 15,814 at the end of 1978 compared to 14,531 in 1977 showing an increase of 1,283 newspapers during the year. Out of the total number of newspapers published in the country, 4,879 (30.8 per cent) were brought out from the four metropolitan cities of Delhi, Bombay, Calcutta and Madras.

INDIA 1980
CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

TABLE 10·5

Number of Newspapers (State and Periodicity wise)—1978

State/ Union territory	Dailies	Tri/bi-Weeklies	Weeklies	Fort-nightlies	Monthlies	Quarterlies	Other periodicity	Annuals	Total
Maharashtra	140	20	509	185	838	278	113	86	2,169
Uttar Pradesh	146	17	1,066	197	511	98	49	5	2,089
Delhi	42	1	268	215	939	327	96	21	1,909
West Bengal	40	7	381	222	624	301	118	19	1,712
Tamil Nadu	67	3	132	162	617	83	38	10	1,112
Andhra Pradesh	48	2	346	150	322	44	23	4	939
Rajasthan	47	1	373	197	174	49	19	4	864
Kerala	98	1	105	85	427	46	26	9	797
Karnataka	83	3	192	119	272	55	31	1	756
Madhya Pradesh	84	8	311	45	107	27	10	3	595
Gujarat	33	3	151	79	257	35	27	3	588
Punjab	34	1	187	79	190	29	26	5	551
Bihar	25	4	204	61	102	29	9	1	435
Haryana	6	—	116	73	83	20	8	—	306
Orissa	11	—	29	23	95	35	8	4	205
Jammu and Kashmir	22	—	108	14	15	3	3	—	165
Chandigarh.	9	—	32	17	51	30	12	3	154
Assam	6	3	39	21	28	13	7	1	118
Himachal Pradesh	—	—	21	14	23	8	8	—	74
Manipur	16	—	5	6	13	5	4	2	51
Tripura	12	2	31	2	2	1	1	—	51
Pondicherry	—	1	6	4	19	14	4	1	49
Meghalaya	1	4	17	4	10	4	3	—	43
Goa, Daman and Diu	8	—	7	3	15	3	2	—	38
Mizoram	12	—	11	—	3	1	1	—	28
Andaman and Nicobar	2	—	3	—	2	1	2	—	10
Nagaland	—	—	3	—	—	2	—	—	5
Dadra and Nagar Haveli	—	—	1	—	—	—	—	—	1
Total . . .	992	81	4,654	1,977	5,739	1,541	648	182	15 814

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

Out of 15,814 newspapers, 992 were dailies, 81 tri/bi-weeklies, 4,654 weeklies and 10,087 other periodicals. Statewise, Maharashtra had the largest number of newspapers (2,169) followed by Uttar Pradesh (2,089), Delhi (1,909), West Bengal (1,712), Tamil Nadu (1,112) and Andhra Pradesh (939). Other States which had more than 500 newspapers were Rajasthan (864), Kerala (797), Karnataka (756), Madhya Pradesh (595), Gujarat (588) and Punjab (551).

The largest number of dailies (146) came from Uttar Pradesh and smallest (One) appeared from Meghalaya. Table 10.5 shows the state and periodicity-wise details of the number of newspapers at the end of 1978.

A language-wise study of newspapers showed that the largest number (4,196) was published in Hindi, followed by 3,085 in English, 1,138 in Bengali and 1,130 in Urdu. Other languages which claimed more than 500 newspapers were : Marathi (913), Tamil (703), Gujarati (634) and Malayalam (609). Bilingual numbered 1,278. Table 10.6 shows publication of newspapers at the end of 1978 language-wise.

TABLE 10.6
NUMBER OF PAPERS
(Language-wise)

Language	Dailies	Tri/bi-Weeklies	Weeklies	Others	Total 1978	Total 1977
English	95	7	345	2,638	3,085	2,892
Hindi	294	24	1,937	1,941	4,196	3,736
Assamese	3	1	15	34	53	50
Bengali	31	9	312	786	1,138	1,003
Gujarati	36	3	154	441	634	618
Kannada	59	3	134	277	473	432
Kashmiri	—	—	1	—	1	1
Malayalam	96	—	90	423	609	567
Marathi	102	11	285	515	913	861
Oriya	10	—	23	135	168	151
Punjabi	21	1	139	188	349	312
Sanskrit	2	—	3	22	27	27
Sindhi	4	—	21	37	62	61
Tamil	60	1	104	538	703	653
Telugu	24	1	129	329	483	463
Urdu	103	6	563	458	1,130	1,047
Bilingual	23	12	300	943	1,278	1,194
Multilingual	5	2	61	236	304	279
Others	24	—	38	146	208	184
TOTAL	992	81	4,654	10,087	15,814	14,531

Circulation of Newspapers

The data available for 1978 showed that the newspapers had a circulation of 408.50 lakh copies as compared to 374.37 lakhs in 1977. The circulation of dailies in 1978 was 112.42 lakhs as compared to 106.72 lakhs in 1977. Out of 7,510 newspapers for which the publishers supplied circulation data, 7,075 or 94.2 per cent claimed a circulation of up to 15,000 copies per publishing day ('small' newspapers) and had a combined circulation of 158.45 lakhs or 38.5 per cent of the total. Another 282 newspapers having circulation between 15,001 and 50,000 copies ('medium' newspapers) claimed a combined circulation of 74.95 lakhs or 18.4 per cent. However, 153 newspapers,

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

having circulation of more than 50,000 copies ('big' newspapers) together accounted for 176.10 lakhs or 43.1 per cent of the total circulation of all the newspapers in India.

Newspapers in Hindi had the highest circulation of 97.06 lakh copies in 1978. The total circulation of Hindi publications increased from 86.79 lakhs in 1977 to 97.06 lakhs in 1978. English also fared better with a total circulation of 90.30 lakh copies in 1978 as against 89.49 lakhs in 1977. Other major language newspapers having a circulation of 10 lakhs and above were : Tamil 41.19 lakhs, Malayalam 31.50 lakhs, Marathi 26.52 lakhs, Bengali 24.45 lakhs, Gujarati 23.24 lakhs, Urdu 16.96 lakhs, Telugu 16.29 lakhs and Kannada 14.60 lakhs. Among the principal languages, Sanskrit newspapers had the lowest circulation (14,000 copies). The language and periodicity-wise break-up of the total circulation in 1978, is given in table 10.7.

TABLE 10.7
CIRCULATION
(Language and Periodicity-wise in 1978)

Language	Dailies	Tri/bi-Weeklies	Weeklies	Other Periodicals	Total
English	2,555	7	1,525	4,943	9,030
Hindi	2,475	37	2,922	4,272	9,706
Assamese	46	17	77	22	162
Bengali	777	9	596	1,063	2,445
Gujarati	831	36	674	783	2,324
Kannda	405	3	440	612	1,460
Malayalam	1,121	—	971	1,058	3,150
Marathi	1,047	9	466	1,130	2,652
Oriya	127	—	22	155	304
Punjabi	209	—	256	221	686
Sanskrit	2	—	3	9	14
Sindhi	3	—	30	15	48
Tamil	726	—	1,871	1,522	4,119
Telugu	430	4	449	746	1,629
Urdu	436	7	744	509	1,696
Bilingual	35	11	301	755	1,102
Multilingual	4	2	36	144	186
Others	13	—	30	94	137
TOTAL	11,242	142	11,413	18,053	40,850

As many as, 5,772 newspapers, which were in existence prior to 1978, made their circulation data available for 1977 and 1978. Termed as 'common papers' their circulation registered an increase of 7.2 per cent in 1978. Language-wise, newspapers in all except Sindhi and Urdu registered growth. Bengali (28.5 per cent) papers were at the top, followed by Marathi (12.2 per cent), Malayalam (9.7 per cent) and Hindi (8.6 per cent). Details are given in table 10.8.

OWNERSHIP

A majority of the newspapers are owned by individuals. In 1978, out of 15,814 newspapers, 10,162 or 64.3 per cent were under individual ownership, followed by societies and associations, which owned 2,774 or 17.5 per cent of the newspapers. The central and state governments together owned 540 or 3.4 per cent of the newspapers.

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

TABLE 10.8
CIRCULATION OF COMMON PAPERS (Language-wise)

Language	No. of Papers	Circulation ('000) 1977	Circulation ('000) 1978	Increase/ Decrease (Per cent)
English	1,207	7,656	7,833	(+) 2·3
Hindi	1,250	7,855	8,530	(+) 8·6
Assamese	22	152	162	(+) 6·6
Bengali	480	1,531	1,967	(+)28·5
Gujarati	282	1,991	2,144	(+) 7·7
Kannada	199	1,270	1,372	(+) 8·0
Malayalam	215	2,240	2,457	(+) 9·7
Marathi	350	1,976	2,218	(+)12·2
Oriya	60	240	253	(+) 5·4
Punjabi	116	497	527	(+) 6·0
Sanskrit	17	12	13	(+) 8·3
Sindhi	17	38	38	—
Tamil	349	3,172	3,283	(+) 3·5
Telugu	181	1,174	1,222	(+) 4·1
Urdu	422	1,357	1,352	(—) 0·4
Bilingual	421	758	823	(+) 8·6
Multilingual	94	144	144	—
Others	90	93	122	(+)31·2
TOTAL	5,772	32,156	34,460	(+) 7·2

TABLE 10.9
DAILIES WITH CIRCULATION ABOVE ONE LAKH

Name, Language and Place of Publication	Circulation 1978	Circulation 1977
Ananda Bazar Patrika, Bengali, Calcutta	3,76,646	3,73,951
Nav Bharat Times, Hindi, New Delhi	2,87,421	2,80,202
Malayala Manorama Malayalam, Kottayam	2,57,073	2,27,299
Jugantar, Bengali, Calcutta	2,28,078	3,28,556
Times of India, English, Bombay	2,27,967	2,22,703
Hindustan Times, English, New Delhi	2,13,871	1,99,012
Lokasatta, Marathi, Bombay	2,05,569	1,95,115
Statesman, English, Calcutta	1,79,414	1,73,396
Hindustan, Hindi, New Delhi	1,71,221	1,59,619
Mathrubhumi, Malayalam, Cochin	1,59,136	1,55,468
Maharashtra Times, Marathi, Bombay	1,53,260	1,62,496
Hindu, English, Madras	1,49,144	1,51,643
Malayala Manorama, Malayalam, Calicut	1,47,992	1,31,508
Tribune, English, Chandigarh	1,47,935	1,35,064
Prajavani, Kannada, Bangalore	1,46,288	1,26,723
Times of India, English, New Delhi	1,46,279	1,31,922
Gujarat Samachar, Gujarati, Ahmedabad	1,36,468	1,22,036
Bombay Samachar, Gujarati, Bombay	1,33,751	1,30,443
Indian Express, English, Bombay	1,28,597	1,20,098
Kerala Kaumudi, Malayalam, Trivandrum	1,26,964	1,19,261
Punjab Kesari, Hindi, Jullundur	1,25,615	1,00,810
Mathrubhumi, Malayalam, Calicut	1,20,565	1,23,169
Sandesh, Gujarati, Ahmedabad	1,18,594	1,12,367
Amrita Bazar Patrika, English, Calcutta	1,17,232	1,08,752
Nai Dunia, Hindi, Indore	1,12,478	1,05,392
Indian Express, English, New Delhi	1,05,769	1,36,919
Deccan Herald, English, Bangalore	1,03,854	95,105
Sakal, Marathi, Pune	1,01,677	96,443

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

Newspapers owned by individuals commanded a circulation of 129.42 lakh (31.7 per cent) copies, while 434 newspapers owned by joint stock companies claimed a circulation of 158.67 lakh (38.9 per cent) copies. Table 10.10 gives the circulation data and ownership pattern of the newspapers.

TABLE 10.10 OWNERSHIP PATTERN

Form of ownership	Number of papers[1]	1978	
		Circulation ('000)	Percentage to total circulation
Individual	4,454	12,942	31·7
Joint Stock Companies	434	15,867	38·9
Firm/Partnerships	412	3,670	9·0
Trusts	259	2,954	7·1
Societies/Associations	1,459	3,336	8·2
Others	492	2,081	5·1
TOTAL	7,510	40,850	100·0

1 Represents newspapers whose circulation data were available.

Newsprint

The requirements of newsprint for newspapers and periodicals in the country are met through indigenous production of the National Newsprint and Paper Mills at Nepa Nagar in Madhya Pradesh and through imports. The total indigenous production for the year 1978-79 was 30-35 thousand metric tonnes.

The newsprint policy for the year 1978-79 (announced on 7 July 1978) provided a growth rate of five per cent over the consumption of newsprint or white printing paper by individual newspapers during 1977-78. However, newspapers were allowed to obtain additional newsprint quota on the basis of their higher performance.

Newsprint Advisory Committee

A newsprint advisory committee, first set up in July 1964, advises the government on the import and allocation policy for newsprint and printing machinery. As re-constituted in 1977, the committee has the Minister of Information and Broadcasting as the chairman. Members include two nominees one each from the Indian and Eastern Newspapers Society and the Indian Language Newspapers Association, one each from the Indian Federation of Working Journalists and the National Union of Journalists (India), three Members of Parliament and six other official nominees of the government. Non-official members hold office for two years from the date of appointment but can be reappointed. The committee meets ordinarily twice a year.

Press Council

The Press Council of India was set up on 1 March 1979, under the Press Council Act, 1976 for safeguarding the freedom of press and for maintaining and improving the standards of newspapers and news agencies in India. The council has the power to consider complaints *suo-moto*, in addition to inquiry into complaints brought before it. It has also been empowered to make observations against any authority including government if it considers it necessary for the performance of its functions.

CC-0. Panjab Digital Library Preservation Foundation, Chandigarh

The council has already finalised the regulations concerning the procedure for inquiry into complaints and also transactions of business. During 1979-80, the council received 68 complaints in all—39 against various newspapers/news agencies under Section 14(1) of the Act and 29 against governments and other authorities—of which 23 and 8 were disposed off respectively.

Press Commission

In May 1978, the then government appointed the second Press Commission under the chairmanship of Justice P. K. Goswami with ten other members to enquire into the growth and status of Indian press and to recommend, how best it should develop in the future. With the change of government, the chairman and members of the Commission tendered their resignations in January 1980 which were accepted.

Subsequently, steps were taken by the government for reconstituting the Press Commission with revised and more comprehensive terms of reference. Justice K. K. Mathew was appointed the new Chairman on 12 April 1980 and ten new members were added to the commission on 18 June 1980. Keeping in view the suggestions received from the various press associations/organisations, the revised terms of reference were finalised on 24 July, 1980. These revised terms enlarge the area of inquiry, impart to these a greater amplitude, add an element of social and national reference and signify the great importance government attaches to the commission's work.

Press Information Bureau

The Press Information Bureau (PIB) disseminates information about the policies and programmes of the Government of India through the media of the press. It also keeps the government informed of the reaction to these policies as reflected in the press. PIB officers attached to various ministries issue press releases and feature articles, arrange press conferences/briefings and maintain contacts with the Indian and foreign correspondents and cameramen accredited to the Government of India. The PIB also co-ordinates publicity with the state governments and the public sector undertakings. It also supplies publicity material to Indian diplomatic missions abroad through the External Publicity Division of the Ministry of External Affairs.

The Bureau's information material is issued in English, Hindi and 16 other languages and is supplied not only to news agencies and journals stationed in Delhi but also to the language press all over the country through its 32 regional and branch offices, which are linked by teleprinter circuits with the headquarters in Delhi.

For the benefit of small and medium newspapers, PIB provides special services like the weekly digest of news, short illustrated feature articles on diverse subjects, economic digest, agricultural newsletter, science notes and health and family welfare newsletter. For district level Hindi papers, a special weekly service "Gramin Patra Seva" is issued. Illustrated success stories covering development activities are also supplied to newspapers.

In 1978, as many as 83,472 press releases were effected, of which 15,704 were in English, 10,404 in Hindi, 9,092 in Urdu and 48,272 in 15 other regional languages. The total number of releases during 1979 was 62,838—13,381 in English, 9,636 in Hindi, 8,310 in Urdu and 31,511 in other languages. At the end of 1979, as many as 5,613 newspapers and periodicals—950 English, 1,491 Hindi, 812 Urdu and

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

2,360 other languages—were supplied with the Bureau's information material.

UNESCO Features

The Press Information Bureau in cooperation with UNESCO issues a fortnightly feature service in Urdu and Hindi. It provides information on educational, cultural, technical and scientific subjects unfolding inventions, discoveries, developments and new ventures of the member states of UNESCO.

Photo Service

The Bureau's extensive photo service caters to the needs of newspapers and journals that have block-making facilities. In addition ebonoid blocks and charbas, meant for small papers and Urdu papers respectively, are also provided by the Bureau. During 1979 the photo unit supplied 23,729 prints to newspapers and journals through the headquarters and regional and branch offices of the Press Information Bureau. Photographs are also supplied in bulk to the External Publicity Division for publicity abroad and during 1979, 13,789 photos were supplied for this purpose.

Accreditation facilities

A Central Press Accreditation Committee advises the government on accreditation of press correspondents, cartoonists and cameramen. Besides supplying publicity material, the Bureau assists the press representatives with facilities like housing, telephone, medical, travel and customs clearance. Four hundred and eightyone Indian and foreign correspondents and 91 cameramen are accredited to the Government of India.

Eighteen news and feature agencies are accredited to the Central Government. Of them, the Press Trust of India, the United News of India, Hindustan Samachar and Samachar Bharati have wire service and are news agencies; and the others—India News and Feature Alliance, India Press Agency, National News Service, News Bureau of India, Press Asia International, Foreign News and Features, POT Analyses and News Service, Cartographic News Service; Television News Features, Depth News (India), Vikrant News Service, Asia Features, Publication Syndicate and Central News Service—are news *cum*-feature agencies. In addition, the following 19 foreign news agencies have been given accreditation—Agence France Presse (France); Ansa (Italian National News Agency); Associated Press of America (USA); Allgemeiner Deutscher Nachrichtendienst (Berlin); Deutshe Pressee Agenture, German Press Agency (FRG); Depthnews Asia, Manila (Philippines); Economic News Service (Hong Kong); Iraqui News Agency (Baghdad); Kyodo News Service (Tokyo); Polish Press Agency (Poland); Reuters (UK); Tass (Moscow); United Press International (USA); Prensa Latina (Cuba); Rashtriya Samachar Samiti (Nepal); Novosty Press Agency (USSR); Tanjug Yugoslav News Agency; Bulgarian Telegraphy Agency and Czechoslovak News Agency.

Information Centres

PIB runs information centres at New Delhi, Jullundur, Srinagar, Imphal, Aizawl, Kohima and Port Blair. They provide reading room and library facilities and answer queries from the journalists and the public. Film shows are also arranged at these centres. Some of the state governments also maintain information centres at New Delhi and elsewhere. In addition, there are information centres maintained by certain central departments.

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

'Wall Newspaper'

A fortnightly wall newspaper, 'Hamara Desh', edited by PIB (started in 1970) is published in Bengali, English, Garo, Gorkhali, Hindi, Khasi, Lushai, Malayalam, Manipuri, Marathi, Tamil and Urdu. It projects the country's achievements and progress in various fields. Copies are displayed at key points in government offices and private organisations, railway stations, canteens, schools, post offices and other places, particularly in remote areas.

News Agencies

The four main news agencies *viz.*, Press Trust of India (PTI), United News of India (UNI), Samachar Bharati and Hindustan Samachar which merged in 1976, to form 'Samachar' started functioning as independent news agencies from 14 April 1978.

Of these the PTI and the UNI supply news in English. The other two are operating through the medium of Hindi and other Indian languages. PTI started its operations in 1949 after taking over Reuters' business in India as well as the interests of the Associated Press of India. Today it has a 1,200 strong editorial and technical staff and its news service is carried over by a teleprinter net work of over 40,000 kilometres length. Over 200 newspapers in India subscribe to the PTI service, besides All India Radio, Doordarshan, Governments (central and states), commercial establishments, universities and public institutions. The UNI started its operations in 1961. Both the agencies mostly depend upon arrangements with foreign international news agencies for collection of news from abroad. Samachar Bharati and Hindustan Samachar mainly serve the language press.

Non-Aligned News Agencies Pool

The non-aligned countries met for the first time at the level of information Ministers between 8-13 July 1976 at New Delhi and in a declaration took note of "the persistent and the serious imbalance in the current global information situation" and its adverse effects on the non-aligned countries, stressed the need "to liberate their information and mass-media" from the colonial legacy, and expressed their collective determination to rectify this situation. The declaration called for "the decolonisation of information" and "the establishment of a new international order for information", which was felt to be "as necessary as the new economic order." To give practical shape to this urge the Non-Aligned News Agencies Pool was set up on 13 July 1976. Along with it, a coordinating committee was also formed to make the Pool operational. India, which played a leading role in the formation of the Pool, was elected chairman of the Coordinating Committee from July 1976 to November 1979.

The Press Trust of India operates the Non-Aligned News Agencies Pool from India. The exchange of news between the Indian news agencies and a number of national news agencies of non-aligned countries is already underway.

FILMS

Feature films are being produced in India since 1912-13. While R.G. Torney produced 'Pundalik' in 1912, Dada Saheb Phalke produced 'Raja Harishchandra' in 1913. The era of silent films was overtaken by the talkie era in 1931 when Ardeshir Irani produced 'Alam Ara'. Over the years, more than 15,060 feature films have been produced in India which now leads the world in the annual output of feature films.

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

During 1979, 714 Indian feature films were certified for public exhibition as compared to 619 films in 1978. Of these, 513 films were in colour in 1979 and 367 in 1978. Bombay, Calcutta and Madras are the most important production centres. During 1979, 178 feature films were certified at Bombay, 61 at Calcutta and 475 at Madras, whereas in 1978, the number of films certified at these centres were 172, 57 and 390 respectively. Bangalore is also fast coming up as a centre for production of feature films. The number of feature films produced in various languages and certified for public exhibition for selected years from 1951 onwards is shown in table 10.11.

As many as 2,611 short films including 1,567 films in 35 mm, 955 films in 16 mm and 89 films in 8 mm were certified for public exhibition during 1979. For 1978 the figures were 1,918, 1,300,596 and 22 respectively.

TABLE 10.11
OUTPUT OF FEATURE FILMS

Language	1951	1956	1961	1966	1971	1976	1977	1978	1979
Assamese	—	3	2	2	5	5	7	6	10
Bengali	38	54	36	30	30	32	31	37	37
Bhojpuri	—	—	—	—	1	—	2	1	2
Dogri	—	—	—	1	—	—	—	—	—
English	—	—	—	—	1	2	3	2	1
Gujarati	6	3	7	2	3	29	30	32	38
Hindi[1]	100	123	109	108	120[2]	106	134	122	114
Kannada	2	14	12	21	33	45	49	54	59
Konkani	—	—	—	—	1	1	1	1	—
Malayalam	7	5	11	31	52	84	91	123	131
Manipuri	—	—	—	—	—	1	—	—	3
Marathi	16	13	15	12	23	10	19	15	19
Nepali	—	—	—	1	—	—	—	1	1
Oriya	—	2	2	2	1	6	11	15	11
Punjabi	4	—	5	4	2	10	12	8	15
Sindhi	—	—	—	1	1	—	—	—	—
Tamil	26	51	49	60	73	81	66	105	140
Telugu	20	27	55	41	85	93	99	94	133
Tulu	—	—	—	—	2	2	2	3	—
TOTAL	219	295	303	316	433	507	557	619	714

[1] Includes Urdu, Rajasthani and Hindustani films

[2] Includes 14 Hindustani, one Maithili, one chattisgarhi and four Urdu films

TABLE 10.12
THEMATIC CLASSIFICATION

Theme	1961	1966	1971	1976	1977	1978	1979
Social	162	189	283	332	420	458	594
Crime	30	35	83	86	55	78	37
Fantasy	23	15	8	9	5	3	8
Historical	15	6	5	10	6	6	9
Biographical	5	4	2	2	4	5	3
Mythological	32	20	16	27	20	16	23
Legendary	26	22	12	27	22	13	15
Devotional	2	1	8	6	19	14	8
Children	1	5	13	4	5	7	12
Stunt	5	3	1	2	—	7	1
Adventure	2	16	—	—	—	—	—
Political	—	—	1	—	—	—	—
Documentary	—	—	1	2	1	1	—
Educational	—	—	—	—	—	—	2
Horror	—	—	—	—	—	1	1
Scientific and technical	—	—	—	—	—	—	—
Other	—	—	—	—	—	—	1
TOTAL	273	303	316	433	507	557	619	714

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

Films are produced on various themes. Social subjects, however, predominate and 594 films in this category were certified during 1979 as compared to 458 the previous year. Table 10.12 gives the thematic classification of feature films certified for public exhibition for selected years from 1961 to 1979.

Documentaries and Newsreels

Weekly Indian News Review, cartoon films, quickies and documentaries required for public information, education and instruction are produced by the Films Division of the Ministry of Information and Broadcasting. The Division set up in 1948 had a modest beginning with the production of only 33 documentary films, 12 compilations and 52 newsreels in 1949-50. Currently, through its annual production of 140 short films (including four cartoon films), 52 national newsreels and 52 regional newsreels, the Division has been recording the contemporary history of India and presenting filmic reports on the socio-economic progress of the country. Most of the films are produced in English and 15 regional languages.

Important newsworthy events within and outside India are included in the weekly national newsreels. The Films Division has exchange arrangements with 18 foreign newsreel organisations for free exchange of important international news events. Eighteen newsreel cameramen stationed at various centres in India cover important news events. News events are also filmed by stringers. At present, the Division releases one newsreel per region in a month. The cartoon film unit of the Division produces cartoons by using a variety of techniques.

Every cinema house in India is required, under the terms of its licence, to exhibit at each performance not more than 609 metres of 'approved films' supplied by the Division on a rental of one per cent of the average weekly collections. One newsreel and two short films are released every week at important centres. These are then rotated to cinema houses at other places in the country. In 1978-79, the Division earned Rs 303 lakhs by way of rentals from cinema houses. From 1 April 1979 to 29 February 1980, the rentals amounted to Rs 244.15 lakhs. During 1978-79, 12,167 prints were supplied free of charge to various publicity units and from 1 April 1979 to 31 March 1980 7,622 prints were supplied free of charge.

The Division also supplies prints on loan to government departments, semi-government bodies, educational and charitable institutions, hospitals, social welfare organisations and individuals through its eight distribution branch offices, as well as through the regional and field publicity units of the Directorate of Field Publicity, for non-commercial shows free of charge.

Documentaries considered suitable for exhibition abroad are supplied to 123 Indian Missions abroad at the instance of the Ministry of External Affairs. The Division has regular arrangements for the screening of its documentaries and newsreels in cinema houses in Fiji Islands and Mauritius. It also sells films to television organisations all over the world on royalty as well as rental basis.

In 1978-79, the Division produced 108 (61 black and white and 47 colour) documentary films through its own units and 21 to black and white and 12 colour) films through independent producers on contract basis. From 1 April 1979 to 31 March 1980, the Division produced 90 (17 black and white and 73 colour) films through its own

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

units and 29 (15 black and white and 14 colour) films through independent producers. The Division released 122 documentary films and 183 newsreels during 1978-79. They included 92 documentary films, 52 national newsreels, 20 regional newsreels and two special newsreels produced by the Division and 30 documentary films and 86 newsreels produced by the state governments. From 1 April 1979 to 31 March 1980, the Division released 139 documentary films and 130 newsreels. They included 106 documentary films, 52 national newsreels and 9 special newsreels produced by the Division and 33 documentary films and 78 newsreels produced by the state governments.

During 1978-79 the Division participated in 48 international film festivals and one national film festival and won six awards. Form 1 April 1979 to 31 March 1980 it participated in 43 international film festivals and 4 national film festivals and won six awards. The films which received major festival awards were : (i) Training and Visits System, (ii) Desert Reclamation, (iii) An Encounter with Faces, (iv) Burning Stone, and (v) An Introduction to Cable-Pressurisation. The films that received national festival awards were : (i) Magic Hand, (ii) It's Indian-It's Good, (iii) Burning Stone, and (iv) I.N.R. 1568.

Censorship

Films can be exhibited in India only after they have been certified by the Central Board of Film Censors. The Board, set up under the Cinematograph (Censorship) Act of 1952, consists of nine members and a chairman, all of whom are appointed by the Government of India. The headquarters of the Board is at Bombay with regional offices at Bombay, Calcutta and Madras. The regional offices are assisted in the examination of films by advisory panels, the members of which are appointed by the government and include educationists, lawyers, social workers and others. The Board was reconstituted in November 1977. The detailed guidelines issued to the Board in 1960 were rationalised and concise guidelines were issued by the government in January 1978. Under these guidelines a film is now to be judged in its entirety from the point of view of its overall impact. The Board has taken steps to curb depiction of violence and vulgarity in films.

The Board examines the films and grants a 'U' certificate for unrestricted public exhibition or an 'A' certificate for exhibition restricted to adults, above the age of 18 years. The Board may direct the applicant to carry out excisions or modifications before granting the certificate. It may also refuse the certificate if the film or any part of it is against the interest of the security of the State, friendly relations with foreign states, public order, decency, morality or involves defamation or contempt of court or is likely to incite the commission of an offence. Whenever any deletions are ordered, their particulars are notified in the Gazette of India. The applicant can appeal to the Government of India within 30 days of an order of the Board.

In 1978, the Board granted 'U' certificates to 1,703 India and 867 foreign films. 'A' certificates were granted to 65 Indian and 41 foreign films. Thirteen foreign films and 4 Indian films were refused certificates. 672 films were certified as predominatly educational. The Board recertified 1,130 films during 1978. Out of them 1,070 films were granted 'U' certificates and 60 'A' certificates.

During 1979, the Board granted "U" certificates to 1,920 Indian and 1,360 foreign films. 'A' certificates were granted to 126 Indian and 72 foreign films. Twenty two foreign films and 3 Indian films were

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

refused certificates. 1,010 films were certified as predominantly educational. The Board recertified 949 films during 1979. Out of them 893 films were granted 'U' certificates and 56 'A' certificates.

Exhibition Facilities

There has been a steady growth of exhibition facilities for showing films in the country. Table 10.13 gives the number of cinemas from 1971-72 to 1978-79.

TABLE 10.13
NUMBER OF CINEMAS

Cinemas	1971-72	1972-73	1973-74	1974-75	1975-76	1976-77	1977-78	1978-79
Permanent	4,590	4,787	5,304	5,474	5,650	5,845	6,030	6,216
Touring	2,711	2,801	2,932	3,266	3,367	3,322	3,521	3,744
Total	7,301	7,588	8,236	8,740	9,017	9,167	9,551	9,960

FILM FINANCE CORPORATION

The Government of India set up the Film Finance Corporation (FFC) in March 1960 with the object of raising the standard of films in the country and helping the development of Indian cinema in all possible ways. In keeping with this objective, the Corporation advances finance for the production of good films, canalises all import of rawstock and feature films, distributes imported as well as its own films and also sponsors film festivals and film weeks.

While a large number of films financed by the Corporation have won awards both in India and abroad, they have not been successfully screened in the country. Drawing from this experience, the Corporation made a complete review of its activities in 1976 and evolved an integrated approach of financing, distribution and exhibition.

During 1978-79, the Corporation sanctioned loans for the production of 9 feature films and 3 documentary films. In order to give fillip to the 16 mm films movement, loans were sanctioned for the productions of five 16 mm films. In addition, three producers who were earlier sanctioned loans for 35 mm production, opted to make their films in 16 mm. which at present costs about 20 per cent less than the 35 mm. The Corporation is also setting up a 16 mm production infrastructure (consisting of cameras, sound equipment and editing facilities), and also a modern sub-titling unit within the country so that the cost of film production is reduced considerably.

The Corporation has already set up script panels in Calcutta and Madras so as to bring its activities closer to the grass-roots of regional cultures. As a result, more applications from these centres have started coming in and for the first time the Corporation has sanctioned a loan for the production of an Assamese film.

The FFC is the sole canalising agency for all rawstock. In order to avoid wastage and to ensure the best possible use of rawstock, steps have been taken by the Corporation to assess the annual demand and rationalise the release of rawstock in accordance with the actual requirements. The Corporation also issues permits for rupee-currency area rawstock.

The Corporation transferred the work of canalising the export of Indian films to the Indian Motion Picture Export Corporation from November 1977. Import of films are canalised by FFC. The concern of the Corporation is to get as wide a cross section as possible from the world cinema. Films are imported not only from developed countries but also from developing countries. At present, films are imported from 16 countries. Special effort is made to import classics of world cinema, specially, for the non-commercial circuit. All the films imported are distributed directly by the Corporation.

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

The Corporation is intensifying its efforts to distribute the films financed by it by developing its own exhibition outlets. As a part of this effort, the non-commercial circuit is being strengthened. Rights of non-FFC Indian films are also being obtained to serve the non-commercial circuits. The Corporation has also succeeded in getting FFC films telecast on an all-India basis.

To overcome the shortage of cinema theatres in the country the Corporation has started a Theatre Financing Scheme by obtaining a loan of Rs 1.00 crore from the Motion Picture Export Association of America funds, and another Rs 1.00 crore by a pari-pasu arrangement with the Canara Bank. More funds for this scheme are to be obtained from the state film bodies. The Corporation has already finalised a scheme for construction of 25 low cost cinema theatres in collaboration with the West Bengal Government. Similar arrangements with Tamil Nadu and Uttar Pradesh Governments are being finalised. In order to obtain innovative designs for low cost functional cinema theatres, FFC also organised a 'theatre design competition.'

In order to encourage writing of better scripts the Corporation instituted a scripts awards competition and received 121 entries. Awards for the best three entries were given in March 1980.

The Corporation has always involved the film industry in all its activities. Well-known producers and directors have been included as members of its script committee at Bombay, Madras and Calcutta which advises the Corporation in financing of films. FFC is also setting up a Film Development Advisory Committee (FDAC) consisting of eminent film makers, film critics and others from the industry to advise the Corporation on various ways of identifying the good cinema movement. To start with, these FDAC's have been set up at Bangalore, Bombay, Calcutta, Madras and Trivandrum.

CHILDREN'S FILM SOCIETY

Films for children are produced mainly by the Children's Film Society. It was set up in May 1955 as an autonomous body, registered under the Societies Registration Act, 1860, to undertake, aid, sponsor, promote and co-ordinate the production, distribution and exhibition of films suited for children and adolescents. In the last 24 years, it has produced and acquired around 190 features and shorts which include live action films, puppet films and cartoons. Of these, 12 films have won national and international awards. The expenditure of the Society is largely met from grants-in-aid given by the central government though it also earns revenue through commercial shows of its films and hire charges of 16 and 35 mm films.

The films of the Society are regularly shown in various metropolitan cities and towns. Many schools, social welfare centres and industrial establishments borrow films from the 16 mm library of the Society for screening at their premises for the benefit of children. The Society organises a festival of children's films throughout the country from 14-30 November every year. It also participates in various international and national film festivals by entering its films.

The Society organised the First International Competitive Children's Film Festival at Bombay from 7 to 16 December 1979. Twenty five countries participated in it. The international jury was headed by Shri Satyajit Ray. A children's jury consisting of 21 child delegates was also constituted and the films adjudged the best by this jury were given special prizes.

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

DIRECTORATE OF FILM FESTIVALS

The Directorate of Film Festivals, set up by the Ministry of Information and Broadcasting in May, 1973, implements the scheme of national film festival and regulates India's participation in international film festivals. It arranges festivals of foreign films in India and of Indian films abroad under bilateral cultural exchange programmes. It also organises International Film Festival of India and other film expositions.

National Film Festival

Instituted in 1953, the scheme of National Film Festival (earlier called National Awards for Films) aims at promoting India's film art by acknowledging outstanding achievements in different categories of film making. In addition, there is the Dadasaheb Phalke Award, a special award for outstanding contribution to the cause of the Indian cinema. The National awards consist of the golden lotus (*Swaran Kamal*) the silver lotus (*Rajat Kamal*) and cash prizes.

The Dadasaheb Phalke Award is decided by the Government of India and entries for the National Film Festival are examined by the two national juries—one for short films and the other for feature films.

For the twenty-sixth National Film Festival, entries of 80 feature films and 82 short films were received. In all 30 awards were recommended for excellence in various fields of cinema. For the first time since the inception of the awards, no recommendation was made for the 'best feature film of the year' category. *'Ganadevata'* (Bengali) was adjudged the best feature film with mass appeal, wholesome entertainment and aesthetic value and awarded *Swaran Kamal* (golden lotus) to its producer and *Rajat Kamal* (silver lotus) to its director. *'Grahana'* (Kannada) was adjudged the best feature film on national integration and awarded *Swaran Kamal* (golden lotus) and a cash prize of Rs 30,000 to its producer and *Rajat Kamal* (silver lotus) and a cash prize of Rs 10,000 to its director. *'Joi Baba Felunath'* (Bengali) was adjudged the best childrens' film and awarded *Swaran Kamal* (golden lotus) and a cash prize of Rs 15,000 to its producer and *Rajat Kamal* (silver lotus) and a cash prize of Rs 10,000 to its director. Smt. Sarada won the best actress award for her role in *'Nimajjanam'* (Telugu) and Shri Arun Mukherjee won the best actor award for his role in *'Parashuram'* (Bengali). Master Kanchan De Biswas was given the best child actor award for his performance in the film *'Ganadevata'* (Bengali). The Dadasaheb Phalke Award for outstanding contribution to the cause of the Indian cinema was given to Shri R. C. Boral.

For the twenty-seventh National Film Festival, entries of 90 feature films and 100 short films were received. The first Hindi feature film produced in Orissa, *'Shodh'*, was adjudged the 'best feature films of the year' and awarded *Swaran Kamal* (golden lotus) and a cash prize of Rs 40,000 to its producer and *Rajat Kamal* (silver lotus) and a cash prize of Rs 20,000 to its director. It also bagged the award for best cinematography (colour). *'Sankarabharanam'* (Telugu) was adjudged the best feature film with mass appeal, wholesome entertainment and aesthetic value. The award for best feature film on national integration was bagged by '22 *June* 1897' (Marathi). The Kannada film *'Dangeyedda Makkalu'* was adjudged as the best childrens' film. Shri Naseeruddin Shah won the best actor award for his role in the film *'Sparsh'* (Hindi) and Smt. Shoba won the best actress award for her role in the film 'Pasi' (Tamil). The best child actor award was bagged by Miss Geeta Khanna for her role in *'Aangan Ki*

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

Kali' (Hindi). The Dadasaheb Phalke Award for outstanding contribution to the cause of Indian cinema was given to Shri Sohrab Modi.

The scheme now covers 26 catagories consisting of all-India and regional awards. The regional awards are meant for films produced in the principal languages of the country.

India's Participation in Film Festivals Abroad

India participated in eleven film festivals abroad during 1979. The Bengali film *'Parashuram'* was awarded a Silver Medal at the XI Moscow International Film Festival.

International Film Festivals in India

The Seventh International Film Festival in India, a competitive international film festival was held in New Delhi from 3-17 January 1979. Thirtynine countries participated in the festival with twentyeight feature films in the official section and 98 feature films in the information section. The festival was organised by the Directorate of Film Festivals in collaboration with the Film Finance Corporation and the Indian Film Industry. The festival is recognised as 'A' grade by the Federation of International Film Producer's Association. It has the distinction of joining the six top ranking festivals of the world, the other five being Cannes, Berlin, San Sabastian, Tehran and Karlovy Vary (alternating with Moscow).

FILMOTSAV '80, the fourth in the series of non-competitive international film festival was held at Bangalore from 3 to 17 January 1980. This was organised by the Directorate of Film Festivals in collaboration with the Film Finance Corporation, the Karnataka Government and the Indian film industry. Films from 39 countries were screened, and a special section of the festival was dedicated to the works of Shri Satyajit Ray in celebration of the twenty-fifth year of the release of *Pather Panchali.*

Other Film Festivals

During 1979-80, the USSR Film Festival and Festivals of Films from Yugoslavia, Poland and GDR were held in India. All these festivals were arranged under the cultural exchange programme with the respective countries. An Indian film week was also held in Brussels in October 1979 and later in The Hague (Netherland).

NATIONAL FILM ARCHIVE OF INDIA

The National Film Archive of India was established in 1964 with the primary object of acquisition and preservation of national and international cinema, film classification, documentation and research and encouraging film study and spread of film culture. Its collections as on 31 December 1979 totalled 5,087 titles, including free deposits and duplicate print/material. It also has ancillary film material of 8,873 books, 214 periodicals, 1341 disc-records, 14558 stills, 3,103 wall posters, 2,688 song booklets, 9,321 film scripts and 3,928 pamphlets/ folders.

Important Indian films acquired during 1979 include Ritwik Ghatak's first film *"Nagarik"* (Bengali, 1954), Tarun Majumdar's *"Balika Bodhu"* (Bengali, 1966), Raja Paranjpe's *"Oon Paus"* (Marathi, 1954), T. R. Sundaram's *"Uthama Puthran"* (Tamil, 1940), *"Burma Rani"* (Tamil, 1944), Amiya Chakrabarthy's *"Daag"* (Hindi, 1952), Hrishikesh Mukherjee's *"Mem Didi"* (Hindi, 1961), Mohan Sehgal's *"New Delhi"* (Hindi, 1956) and Basu Chatterjee's *"Swami"* (Hindi, 1978).

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

The Archive is a member of the International Federation of Film Archives. This enables it to acquire foreign film classics at nominal print cost and exchange films with foreign archives. Notable recent acquisitions of foreign films are : Bert Haanstra's "Human Dutch" (1963), Elio Petri's "The Working Class Goes to Heaven" (1975), Georgi Shengelaya's "Pirosmani" (1971), Sergei Mikaelian's "The Bonus" (1975) and Jean Renoir's "The River" (1951).

As a part of its screen education activities the Archive conducts refresher courses in film appreciation at Pune and other centres jointly with the Film and Television Institute of India and in collabortion with the universities and film study groups. It also holds daily screenings at Pune for film students and regular weekly screenings at Bombay for the general public. The Archive maintains a distribution library of about 100 Indian and foreign films which are loaned to film societies and film study groups throughout the country for non-commercial study screenings.

A selection of 25 Indian films of the period 1913-60 from the Archive collection was presented in the Festival of Third World Films in Paris in 1979.

Exports

Indian films are exported to nearly 90 countries in the world. The traditional markets are the Gulf countries, Canada, East Africa, Fiji, Indonesia, Iran, Malaysia, Mauritius, Singapore, Sri Lanka, Thailand, UK, USA, West and North Africa and West Indies. Among the non-traditional markets, USSR has emerged as an important buyer.

The Indian Motion Pictures Export Corporation (IMPEC) set up in 1963, is now the sole canalising agency for export of Indian feature films and promotes the sale of Indian feature films abroad. It is estimated that about 800 Indian feature films are exported to various parts of the world every year. Indian films mostly made in Hindi are very popular in a large number of countries. They are directly exported to about 40 territories.

TABLE 10.14
CINE FILM AND EQUIPMENT IMPORTS

Year	Unexposed Sensitised film in rolls		Exposed Cine Film (Whether developed or not)		Sound recording equipment	Projection equipment[1]
	Quantity (lakh metres)	Value (Rs lakhs)	Quantity (lakh metres)	Value (Rs lakhs)	Value (Rs lakhs)	Value (Rs lakhs)
1970-71	777·86	532·59	23·30	36·68	1·91	175.39
1971-72	911·84	638·69	15·19	25·57	2·03	34·77
1972-73	831·45	641·08	23·57	29·37	2·87	56·56
1973-74	686·45	627·41	11·44	18·37	8·43	45·82
1974-75	613·89	630·75	11·61	23·37	4·23	51·42
1975-76	332·49	577·03	55·97	186·60	3·92	48·09
1976-77	218·44	468·33	32·16	83·76	1·21	74·09
1977-78	117·34	317·39	40·09	185·24	5·48	62·12
1978-79 (April 78 to Jan. 79)[2]	110·87	601·32	31·49	105·61	3·36	64·77

1 Includes value of parts and accessories of cine cameras, projectors etc. for which separate figures are not available.

2 Provisional

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

The IMPEC has exclusive agreements with as many as 10 countries including Afghanistan, Algeria, Burma, Iraq and USSR which import Indian films only through IMPEC. While film exports from India during April 1979 to January 1980, amounted to Rs 9.92 crores, IMPEC's share was Rs 40.11 lakhs.

Cine Film and Equipment

Cinematographic film and equipment are produced indigenously and also imported to meet the requirements of the film industry. The imports were valued at Rs. 5.70 crores in 1977-78. Table 10.14 shows the quantity and value of imports from 1970-71 onwards.

PUBLICATIONS

The Publications Division of the Ministry of Information and Broadcasting is the biggest publishing house in the public sector. Originally set up in 1941 as the foreign branch of the Bureau of Public Information, it acquired its present name and separate identity in 1944. It publishes priced books, journals and other printed material in Hindi, English and other Indian languages on a wide range of subjects including art and culture, history and tradition, political evolution, democratic process, economic development and social resurgence. The Division has so far published about 5,500 books and sold publications worth Rs 5.50 crores.

The Division has seven major series under which it publishes books. These are : (a) The Collected Works of Mahatma Gandhi; (b) Children's literature; (c) Builders of Modern India; (d) Cultural Leaders of India; (e) States of Our Union; (f) Speeches of leaders; and (g) Reference publications.

Books under the series "The Collected Works of Mahatma Gandhi" are produced in English and in Hindi. These include Gandhiji's speeches, writings, interviews and letters chronologically arranged and critically edited. Seventy-eight volumes in English and 71 volumes in Hindi have so far been published. The series is expected to run into 90 volumes.

Books and monographs for children are produced on subjects of national interest and relevance. To mark the International Year of the Child the Division undertook the production of 24 titles for children. Twenty-three books have been produced so far.

The "Builders of Modern India" series concentrates on presenting biographies of eminent sons and daughters of India who had played a prominent part in the national renaissance and the struggle for Independence. Fifty-one biographies have been published so far and 20 more are in various stages of preparation.

Books under the "Cultural Leaders of India" series provide the readers with authentic accounts of the life and work of the great figures since the ealiest times to the 19th Century, who contributed to the culture and thought of India. Those under "States of Our Union" series serve as an introduction to different states and union territories. Seven titles have been brought out under Cultural Leaders of India and 23 under "States of our Union" series.

The Division also publishes speeches of national leaders including the President, the Vice-President and the Prime Minister.

Reference publications brought out by the Division include "India—A Reference Annual" and "Mass Media in India".

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

Apart from this, the Division also brings out art books. Some of the important publications include "Kangra Valley Painting", "Basohli Painting", "Garhwal Painting" and "Heritage of Indian Art".

The Division brings out 20 journals of varying periodicity. "Yojana" a journal devoted to planning is brought out in Assamese, Bengali, English, Gujarati, Hindi, Malayalam, Marathi, Tamil and Telugu. "Bal Bharati" (Hindi) is produced for children while "Ajkal" (Hindi and Urdu) serves the cultural needs of adult readers. Other journals include the "Indian and Foreign Review", "Kurukshetra" and "Employment News", a weekly published in English, Hindi and Urdu.

The books and journals are sold through a network of over 3,000 booksellers and the Division's own sales emporia, which are located in New Delhi, Bombay, Calcutta, Madras, Patna and Trivandrum.

The Division has won several national awards for excellence in printing and designing. One of the Division's books "Our Tribal Children" in English was awarded the 'certificate of merit' for excellence in printing. The October 22-November 6, 1977 issue of Yojana (Hindi) won a 'certificate of merit' for excellent production.

ADVERTISING AND VISUAL PUBLICITY

The Directorate of Advertising and Visual Publicity (DAVP) is the central agency of the Government of India for undertaking advertising and visual publicity campaigns on behalf of the various ministries and departments through press advertisements, printed publicity materials like posters, folders, leaflets, brochures and booklets, outdoor publicity items like hoardings, panels, cinema slides, metallic tablets, radio and television 'spots' and sponsored programmes. Policies and programmes of the government are also publicised through photographic exhibitions. The Directorate had 39 field exhibition units in 1978, most of them at state capitals, including five mobile vans and one exhibition rail coach.

The Directorate organised in 1978-79 1,027 exhibitions covering 4,821 exhibition days. It designed and produced an exhibition entitled 'Children of India' to coincide with the 'International Year of the Child'. Another major project was an exhibition on communal harmony entitled 'We Are One', bringing home the fact that it is the innocent people who suffer most in communal disturbances. The various exhibition programmes attracted 2.04 crore visitors. The Exhibition Division also put up exhibitions on themes like 'Better Life For Villages', 'Our Villages' and 'Happy Child-Happy Family'.

The multi-media national campaigns of the Directorate are launched to inform and educate the people on matters of immediate and long-term interest. Major campaigns aimed at educating the people about civil rights, general elections to the seventh Lok Sabha, timely payment of taxes, family welfare, to project agro-economic development of the country, to encourage people to grow more food and to save grains were taken up. Other campaigns related to mobilisation of savings, popularisation of handlooms and handicrafts, road safety and the use of standard weights and measures. The Directorate also undertook major campaigns for communal harmony, enforcing prohibition and eradicating untouchability.

Advertisements

Advertisements of all the ministries and departments of the Govern-

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

ment of India excluding railways, are released to the press by DAVP. While selecting newspapers for these advertisements, special consideration is given to medium and small newspapers. To qualify for government advertisements, a newspaper or periodical has to fulfill three minimum requirements, *viz.* circulation, regularity of publication and print area. The DAVP also accredits advertising agencies which undertake publicity work of public sector undertakings and autonomous bodies.

Awards for Printing and Designing

The Directorate organises a competition every year for the 'National Awards for Excellence in Printing and Designing of Books and other Publications' in order to generate healthy competitive endeavours for higher standards in printing and layout. The twentieth awards were announced in 1979 and a total of 475 awards were given to 274 winners under 69 categories.

Distribution

The DAVP maintains an 'address library' of about 10.00 lakh addresses covering over 300 categories of target audience, 60 per cent of which belong to rural categories like panchayats, primary/high schools, block development officers, rural post offices, rural libraries, etc. for the mailing of its various publicity materials. During 1978-79, DAVP distributed 343 lakh copies of various publicity materials covering nearly 20.00 lakh direct mail despatches to various target audience.

FIELD PUBLICITY

The Directorate of Field Publicity with its countrywide network of 226 mobile field units, plays a vital role in development communication. Field Publicity Officers, who are incharge of these units, undertake tours particularly in rural, tribal, backward and border areas and organise a variety of publicity programmes like film shows, group discussions, talks, seminars, song and drama programmes and photo-displays. These programmes pertain to major national themes like national integration, adult education, child welfare, family welfare, agriculture and agro-based and small-scale industries. Publicity programmes are also organised to make the people aware of social evils like untouchability and drinking. On special occasions like the International Year of the Child, family welfare fortnight and National Adult Education Programme, intensive publicity campaigns are launched by the field units. A sustained campaign is done before elections to educate the voters of their rights.

Monitoring public reaction to the policies and programmes of the government is an important task assigned to the field publicity officers. Their reports are consolidated at the headquarters and sent to government. Success stories about people's participation in development programmes are also noticed and reported to other media units of the Ministry. Another important activity that is undertaken is to organise conducted tours of groups of opinion leaders from border and tribal areas. They are taken to various centres of developmental and cultural interest in the country so that they may build public opinion in favour of socio-economic development plans. These conducted tours also promote national integration.

In 1979, the field units remained on tour for nearly 24,000 days and organised over 69,000 film shows and 12,000 song and drama

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

programmes. These programmes were witnessed by nearly 5.7 crore people.

EXTERNAL PUBLICITY

The External Publicity Division of the Ministry of External Affairs explains and interprets and the policies of the Government of India to foreign audiences. It supplies publicity material to Indian Missions abroad for distribution. For quick transmission of developments at home, it maintains teleprinter link with several Indian Missions abroad, while material received from them is issued to the India Press. The Division provides necessary facilities for Indian journalists who are sent abroad under the cultural exchange programme, while foreign journalists are provided with facilities in India.

The Division brings out a fortnightly, "Indian and Foreign Review" and its French version, "Courrier de l'Inde". It also publishes the monthly, "Foreign Affairs Record", a documentation of official pronouncements on subjects related to India's foreign policy.

PHOTO DIVISION

The Photo Division of the Ministry of Information and Broadcasting caters to the requirements of photographs for internal and external publicity. Its main function is to photographically document the growth and social change taking place in the country and provide visual support required in the activities of the other media units of the Ministry. Photographs are also supplied to other ministries and government departments and to the members of the public on payment.

The Division maintains a library of photographic negatives (more than three lakhs in number) of great archival and historic importance pertaining to national and international events since independence and photographs of the country, its landscape and people taken over the years. The legend and reference of these negatives are maintained in a separate photo library under the Press Information Bureau.

The main office of the Photo Division is located in Delhi. It has regional offices at Madras, Calcutta and Bombay. The Division has well equipped dark room facilities and sophisticated cameras. In addition, it has a special colour laboratory with automatic processing and printing machines.

SONG AND DRAMA DIVISION

The Song and Drama Division of the Ministry of Information and Broadcasting, established in 1954, utilises live entertainment media to make the masses aware of the various national programmes and objectives. It uses a wide range of stage forms like puppet shows, plays, dances, dramas, ballads, *Harikathas* and sound and light shows for this purpose. The programmes are organised through 41 departmental troupes and about 500 private parties registered with the Division. Several central and state agencies are also used for arranging programmes in the field. The Division presents various types of programmes for the masses, which include both rural and urban people, tribal people in interior-most areas and especially the armed forces personnel posted in the forward areas. The programmes

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

create an awareness of the social, economic and democratic ideals cherished by the nation.

In 1969, the Division created Theatre Panosonic—a sound and light spectacle with live action by a large number of artists, which can be witnessed from different angles by thousands of people at a time. The success of the programmes produced in this medium prompted the Government to create a special Sound and Light Wing in the Division as part of the fifth five year plan. The Division has presented lives of great poets, viz., Subramania Bharati, Amir Khusro, Vidyapati and the epic story of Ram Charit Manas in this medium.

A new programme of screening popular feature films at nominal rates in the prestigious open air theatre Rabindra Rangshala, in New Delhi, was started in 1974. This is a pioneering step in the open air cinema movement in the country for providing healthy entertainment to the people.

RESEARCH AND REFERENCE DIVISION

The Research and Reference Division of the Ministry of Information and Broadcasting collects basic information on various subjects, studies in depth problems of national significance and provides reference service to the media units of the Ministry of Information and Broadcasting and others. The Division also provides UNESCO and other well known international reference publications information about India. Besides, it studies trends in the mass communication media.

The Division has been maintaining a news index and a reference service. Items of long-term interest from "The Hindu" and "The Economic Times" as also articles from important periodicals are indexed. In addition, news items, articles and comments from the metropolitan and mofussil papers in English are clipped and classified.

The Division's regular services include 'Background to the News' and 'Reference Papers' on matters of topical interest. Biographical sketches of eminent persons in various fields are also prepared by the Division. The Division also compiles 'India—A Reference Annual' which is a standard work of reference and provides objective and authentic information on diverse aspects of national life and activities in India. A Mass Communication Annual to provide basic and up-to-date information and statistics on different media of mass communication in the country is being brought out by the Division from 1978.

A National Documentation Centre on Mass Communication was set up in 1976 as part of the Research and Reference Division with the broad object of collecting and disseminating information relating to mass communication studies and problems. The Centre provides documentation services on the different media of mass communication —press, films, broadcasting and audio-visual publicity.

During 1979, the Division brought out 80 back-grounders and research and reference papers on various subjects. The Documentation Centre brought out 30 papers under its various services like bibliography service, current awareness service, etc.

MASS COMMUNICATION TRAINING

Training in mass communication subjects is given by a number of institutions in the country. Among the universities which offer degree/

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

diploma courses in journalism are the Universities of Banaras, Berhampur, Calcutta, Gauhati, Jabalpur, Madras, Marathwada, Mysore, Nagpur, Osmania, Pune, Punjab, Punjabi, Ravishanker and Shivaji. The Punjab Agricultural University at Ludhiana has M.Sc. course in journalism for science graduates and Bangalore University has B.Sc. and M.Sc. courses in communication.

Staff Training (Programmes)

The Staff Training Institute (Programmes) of All India Radio imparts training to members of its staff in the planning and production of all types of programmes like spokenword, drama, music, radio reports, farm broadcasting, educational programmes, etc. Training is also given in programme administration, audience research and allied topics. The Institute at Delhi has two regional training centres at Hyderabad and Shillong.

The training programme comprises four-week basic courses as well as short workshop courses and seminars. Experts in different fields, inside as well as outside the department, are invited to speak to the trainees and initiate discussions. Foreign trainees deputed by broadcasting organisations, also benefit from these programmes.

Staff Training (Technical)

The Staff Training Institute (Technical) has the responsibility of maintenance training of engineers of All India Radio and Television. The Institute runs a basic orientation course and an induction course for the in-service personnel and also conducts specialised courses on various subjects like tape recording, frequency modulation, semiconductor technology, digital technology and T.V. receiver maintenance. Trainees from foreign countries are accommodated in these courses under the Colombo Plan and other programmes.

Film and Television Training

The Film and Television Institute of India (FTII), set up at Pune in 1960 by the Ministry of Information and Broadcasting, offers training in the art and craft of film and television. FTII became an autonomous body in October 1974.

The Institute at present conducts a two-year integrated diploma course in cinema leading to specialisation in the third year in motion picture photography or editing. It also offers a course of one and a half years duration in sound recording and sound engineering and post diploma course in film direction and TV production. The television training has so far been an in-service training for the employees of Doordarshan. Apart from the general course, short term specialised courses are also conducted for the employees of Doordarshan.

Indian Institute of Mass Communication

The Indian Institute of Mass Communication was set up by the Ministry of Information and Broadcasting in August 1965 as a centre for training and research in mass communication. It was made autonomous in January 1966. The Institute's instruction courses cover developmental journalism, the print media, audio-visual aids and films, radio and television, oral communication, traditional media, advertising, campaign planning and communication research.

The regular training courses offered at this Institute are : (i) a nine-month post graduate diploma course in journalism for graduates from Indian Universities and foreign scholars with journalistic background from developing countries; (ii) an eight-month diploma course in news agency journalism for persons from news agencies of non-aligned countries, to enhance their professional skills and background

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

and (iii) six-week refresher courses (normally six in a year) for middle-level personnel of the central and state information departments and of public sector undertakings. Other training courses are workshop-newswriting, photography and traditional media of communication.

In 1979 the Institute organised workshops for editors of government jounrnals and for journalism teachers. A special course in communication was also organised for probationers of the Indian Foreign Service.

In addition to training courses, the Institute organises or collaborates with other institutions in organising seminars on professional problems concerning the media. In 1979 a symposium on "cinema in developing countries", and seminars on "rural development and communication policies", "External Publicity" and "Autonomy for Radio and Television" were conducted.

The Institute also conducts research on national and international communication problems. In 1979 it undertook a study of the coverage of UNCTAD-V in Asian and African newspapers on behalf of the International Foundation Development Alternatives Geneva, and part of a UNESCO study of images of foreign countries on behalf of the International Association of Mass Communication Research.

EVALUATION

The Directorate of Evaluation in the Ministry of Information and Broadcasting organises studies on particular aspects of the performance of the media units through the Indian Institute of Mass Communication and other bodies. During 1979 four evaluation studies entrusted by the Directorate to the Indian Institute of Mass Communication were completed and seven more assessment and impact studies were in progress.

INTERNATIONAL COMMISSION ON COMMUNICATION PROBLEMS

The sixteen-member International Commission for the Study of Communication Problems constituted by UNESCO held its fifth session in India in March 1979, at the invitation of Government of India. During the session two round table discussions on 'national policy on communication in support of development' were arranged in which a number of prominent media-men and experts from India participated. The Commission has since completed its work and is finalising its report.

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

11 BASIC ECONOMIC DATA

India is rich in natural resources and man-power. These resources have, however, not been exploited fully and are capable of greater utilisation. The Indian economy is still predominantly agricultural, about half of the country's national income is derived from agriculture and allied activities which absorb nearly three-fourths of its working force. Since 1947, the aim has been to diversify the economy by accelerating the pace of industrial development, increase agricultural productivity and achieve all-round progress under the national plans.

NATIONAL AND PER CAPITA INCOMES

National income in India is defined as the sum of incomes accruing to the factors of production supplied by normal residents of the country before deduction of direct taxes. It is identically equal to net national product at factor cost. Table 11.1 gives the estimates of national and per capita incomes at current and 1970-71 prices, as compiled by the Central Statistical Organisation.

Table 11.2 gives national product and related aggregates at current prices. Table 11.3 gives the performance of public sector. Table 11.4 gives the private final consumption expenditure, net domestic savings and capital formation since 1970-71. Table 11.5 gives distribution of net domestic product between compensation of employees, mixed income of self-employed, interest, rent and profits and dividends.

TABLE 11.1
NATIONAL AND PER CAPITA INCOMES AT FACTOR COST

Item	1970-71	1971-72	1975-76[1]	1976-77[1]	1977-78[2]
Net National product at factor cost (Rs crores)					
at current prices . .	34,368	36,745	61,609	66,561	73,157
at 1970-71 prices . .	34,368	34,865	39,849	40,395	43,395
Per capita net national product (Rs)					
at current prices . .	635·3	663·3	1,020·0	1,080·5	1,163·1
at 1970-71 prices . .	635·3	629·3	659·8	655·8	689·9
Index number of net national product with 1970-71 as base					
at current prices . .	100·0	106·9	179·3	193·7	212·9
at 1970-71 prices . .	100·00	101·4	115·9	117·5	126·3
Index number of per capita net national product with 1970-71 as base					
at current prices . .	100·0	104·4	160·6	170·1	183·1
at 1970-71 prices . .	100·0	99·1	103·9	103·2	108·6
Gross national products at factor cost (Rs crores)					
at current prices . .	36,582	39,147	65,692	71,047	78,012
at 1970-71 prices . .	36,582	37,152	42,369	43,038	46,158
Index number of gross national product with 1970-71 as base					
at current prices . .	100·0	107·0	179·6	194·2	213·3
at 1970-71 prices . .	100·00	101·6	115·8	117·6	126·2

[1]Provisional [2] Quick estimates.

TABLE 11·2

NATIONAL PRODUCT AND RELATED AGGREGATES

(at current prices)

(*Rs crores*)

Item	1970-71	1971-72	1973-74	1974-75	1975-76[1]	1976-77[1]
(a) Gross national product at factor cost	36,582	39,147	53,695	62,913	65,692	71,047
(b) Add indirect taxes less subsidies	3,527	4,093	5,168	6,659	7,933	8,344
(c) Gross national product at market prices (a+b)	40,109	43,240	58,863	69,572	73 625	79,391
(d) Less consumption of fixed capital	2,214	2,402	3,030	3,598	4,083	4,486
(e) Net national product at market prices (c—d)	37,895	40,838	55,833	65,974	69,542	74,905
(f) Less net factor income from abroad	(—)284	(—)291	(—)325	(—)291	(—)255	(—)232
(g) Net domestic product at market prices (e—f)	39,179	41,129	56,158	66,265	69797	75,137
(h) Net domestic product at factor cost	34,652	37,036	50,990	59,606	61,864	66,793
(i) Less income from entrepreneurship and property accruing to government administrative departments	574	648	545	790	984	1,344
(j) less saving of non-departmental enterprises	70	20	121	430	228	628
(k) Income from domestic product accruing to private sector (h—i—j)	34,008	36,368	50,324	58,386	60,652	64,821
(l) Add national debt interest	244	296	510	417	627	822
(m) add net factor income from abroad	(—)284	(—)291	(—)325	(—)291	(—)255	(—)232
(n) Add current transfers from government administrative departments	578	727	909	1,150	1,350	1,599
(o) Add other current tranfers from the rest of the world (net)	123	163	192	274	528	706
(p) Private income (k+l+m+n+o)	34,669	37,263	51,610	59,936	62,902	67,716
(q) Less saving of private corporate sector	223	286	481	771	350	306
(r) Less corporation tax	370	472	583	709	862	982
(s) Personal income (p—q—r)	34,076	36,505	50,546	58,456	61,690	66,426
(t) Less direct taxes paid by households	721	803	1,070	1,259	1,781	1,936
(u) Less miscellaneous receipts of government administrative departments	162	271	150	182	186	173
(v) Personal disposable income (s—t—u)	33,193	35,431	49,326	57,015	59,723	64,317

1 Provisional.

2 Available data do not permit separation of fees, fines, etc. paid by producers and to that extent personal disposable income is under-estimated.

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

CC-0. Agamnigam Digital Preservation Foundation, Chandigarh

TABLE 11·3

PERFORMANCE OF PUBLIC SECTOR

(at current prices)

(*Rs crores*)

Item	1970-71	1971-72	1972-73	1973-74	1974-75	1975-76[1]	1976-77[1]	1977-78[2]
Net Domestic product	34,652	37,036	40,724	50,990	59,606	61,864	66,793	73,389
Public	5,022	5,636	6,234	7,256	9,514	11,370	13,140	14,298
Private	29,630	31,400	34,490	43,734	50,092	50,494	53,653	59,091
Share of public to total (per cent)	14·5	15·2	15·3	14·2	16·0	18·4	19·7	19·5
Net domestic saving	4,584	5,059	5,064	7,753	9,664	11,165	14,052	14,643
Public	804	762	740	1,082	2,442	2,829	3,196	3,221
Private	3,780	4,297	4,324	6,671	7,222	8,336	10,856	11,422
Share of public to total (per cent)	17·5	15·1	14·6	14·0	25·3	25·3	22·7	22·0
Net domestic capital formation[3]	5,144	5,972	5,875	7,784	11,505	12,543	13,635	13,554
Public[4]	2,323	2 650	3,018	4,089	5,279	6,923	7,167	5,920
Private	2,821	3,322	2,857	3,695	6,226	5,620	6,468	7,634
Share of public to total (per cent)	45·2	44·4	51·4	52·5	45·9	55·2	52·6	43·7
Final consumption expenditure	33,455	36,390	39,917	48,107	58,204	60,086	61,361	67,477
Public administration	3,773	4,432	4,728	5,067	6,001	7,158	7,774	8,405
Private household and non-profit institutions	29,682	31,958	35,189	43,040	52,203	52,928	53,587	59,072
Share of public to total (per cent)	11·3	12·2	11·8	10·5	10·3	11·9	12·7	12·5

[1] Provisional.

[2] Quick estimates.

[3] Unadjusted for errors and omissions.

[4] Including net purchase of second-hand physical assets.

TABLE 11·4

PRIVATE CONSUMPTION, SAVING AND CAPITAL FORMATION

Year	Private final consumption expenditure (*Rs crores*)		Per capita private final consumption expenditure Rs		Net domestic saving (*Rs crores*) at current prices	Rate of saving[1] at current prices (per cent)	Net domestic capital formation (*Rs crores*)		Rate of capital formation (per cent) at current prices
	at current prices	at 1970-71 prices	at current prices	at 1970-71 prices			at current prices	at 1970-71 prices	
1970-71 . . .	29,682	29,682	548·7	548·7	4,584	12·0	4,978	4,978	13·0
1971-72 . . .	31,958	30,579	576·9	552·0	5,059	12·3	5,537	5,220	13·5
1972-73 . . .	35,189	30,157	621·7	532·8	5,064	11·2	5,361	4,611	11·8
1973-74 . . .	43,040	30,978	743·4	535·0	7,753	13·8	8,145	6,165	14·5
1974-75 . . .	52,203	31,162	883·2	527·3	9,664	14·6	10,317	6,115	15·6
1975-76[2] . . .	52,928	32,502	876·3	538·1	11,165	16·0	11,048	6,065	15·8
1976-77[2] . . .	53,587	32,455	869·9	526·9	14,052	18·7	12,895	6,996	17·2
1977-78[3] . . .	59,072	34,729	939·1	552·1	14,643	17·8	13,681	7,219	16·6

1 As per cent of net domestic product at market prices.

2 Provisional.

3 Quick estimates.

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

TABLE 11.5
DISTRIBUTION OF FACTOR INCOMES AT CURRENT PRICES

(*Rs crores*)

Item	1970-71	1971-72	1972-73	1973-74	1974-75	1975-76[1]	1976-77
(i) Compensation of employees	13,357	14,453	15,771	17,733	21,044	24,135	26,142
(ii) Interest .	1,788	2,050	2,508	2,677	3,394	3,797	4,362
(iii) Rent . .	1,763	1,946	2,092	2,159	2,295	2,657	2,925
(iv) Profits and dividends .	1,620	1,810	1,836	2,251	3'290	3,581	4,744
(v) Mixed income of self- employed[2] .	16,124	16,777	18,517	26,170	29,583	27,694	28,620
(vi) Net domestic product .	34,652	37,036	40,724	50,990	59,606	61,864	66,793

[1] Provisional
[2] Income of own account workers and profits and dividends of un-incorporated enterprises.

EMPLOYMENT AND UNEMPLOYMENT

For 1971 census, the population was divided into workers and non-workers. There were nine categories of workers, *viz.*, (i) cultivators, (ii) agricultural labourers, (iii) livestock, forestry, fishing, etc. (iv) mining and quarrying, (v) manufacturing, processing, etc., (vi) construction, (vii) trade and commerce, (viii) transport, storage and communication, and (ix) other services. Non-workers were divided into the following seven categories; (i) those engaged in household duties, (ii) students, (iii) retired persons of rentiers, (iv) dependants, (v) beggars, (vi) those living in institutions, and (vii) other non-workers. Table 11.6 shows the number of workers and non-workers in rural and urban areas as on 1 April 1971.

TABLE 11.6
POPULATION WORKERS BY CATEGORIES AND NON-WORKERS

(*In crores*)

	Rural	Urban	Total
Total population	43·91	10·91	54·82
Workers	14·85	3·20	18·05
(i) cultivators	7·65	0·17	7·83
(ii) agricultural labourers . .	4·56	0·19	4·75
(iii) livestock, forestry, fishing, etc. .	0·38	0·05	0·43
(iv) mining and quarrying . .	0·06	0·03	0·09
(v) manufacturing, processing etc. .	0·82	0·89	1·71
(vi) construction	0·11	0·11	0·22
(vii) trade and commerce . .	0·36	0·64	1·0
(viii) transport, storage and, ommunication	0·12	0·32	0·44
(ix) Other services	0·78	0·80	1·58
Non-workers	29·06	7·71	36·77

Employment in Organised Sector

The employment position in the entire country is not yet available for the inter-censual period. However, the data collected under Employment Market Information give an idea of employment in the organised sector covering the entire public sector and those establishments in the non-agricultural private sector employing 10 or more persons.

Employment in the organised sector as on 31 March of the years 1974 to 1978 has been shown in table 11.7.

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

The table also shows that during the Fourth Plan period 26.49 lakh more persons got employment—2.55 lakhs in the public sector and 1.94 lakhs in the private sector. During the subsequent four years, the employment in the organised sector increased by 22.05 lakhs of which public sector alone provided for 19.56 lakhs as on 31 March 1978.

TABLE 11.7
EMPLOYMENT IN ORGANISED SECTOR

(*in lakhs*)

	March 1974	March 1975	March 1976	March 1977	March 1978
Public Sector :					
Central government	29·39	29·89	30·47	30·79	30·96
State government	47·06	47·68	49·39	51·07	54·01
Quasi-government	29·12	31·92	33·92	36·75	39·29
Local bodies	19·28	19·41	19·85	19·88	20·15
Total	124·85	128·90	133·63	138·49	144·41
Private sector (non-agricutural)					
Larger establishments (employing 25 or more workers)	60·71	60·90	61·13	61·36	63·22
Smaller establishments (employing 10-24 workers)	7·23	7·09	7·31	7·30	7·21
Total	67·94	67·99	68·44	68·66	70·43
Grand Total	192·79	196·89	202·07	207·15	214·84

Unemployment

A comparable series on the level of unemployment in the country is not yet available. However, the number of persons on the live register of employment exchanges gives an idea of the trend of unemployment subject to certain limitations. Employment exchanges cover mainly urban areas. Registration with the employment exchanges being voluntary, not all the unemployed register their names in the exchanges. Further, some of the registrants are already employed but have registered for seeking better employment. The number of job seekers on the live registers of employment exchanges increased from 34.23 lakhs as on 31 December 1969 to 126.78 lakhs as on 31 December 1978. Table 11.8 gives the occupational distribution of registrants with the employment exchanges as on 31 December 1978.

TABLE 11.8
APPLICATIONS ON THE LIVE REGISTER OF EMPLOYMENT EXCHANGES

Occupational group	Number as on 31-12-1978 ('000)	Percentage to total
Professional, technical and related workers	705·8	5·6
Administrative, executive and managerial workers	10·0	0·1
Clerical and related workers	683·0	5·4
Sales workers	2·4	—
Farmers, fishermen, hunters, loggers and related workers	344·0	2·7
Service workers	41·5	0·3
Production and related workers, transport equipment operators and labourers	1,175·4	9·3
Workers not classified by occupations		
(a) Below matric (including illiterates and others)	4,364·8	34·4
(b) Matric and above but below graduates	4,055·5	32·0
(c) Graduates and above	1,295·4	10·2
Total	12,677·8	100·0

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

NATIONAL SAMPLE SURVEY ORGANISATION

The National Sample Survey (NSS) was set up in 1950 with the aim of obtaining comprehensive and continuing information relating to social, economic, demographic, industrial and agricultural statistics through sample surveys on a countrywide basis. In 1970, a National Sample Survey Organisation (NSSO) was created and the National Sample Survey was made a part of the new organisation. The NSSO has four divisions, namely, (i) Survey, Design and Research, (ii) Field Operations, (iii) Data Processing, and (iv) Economic Analysis to conduct its sampling enquiries. The activities of NSSO are governed by a governing council. Five zonal training centres have been set up for imparting training to the technical staff of the field operation divisions.

The activities of NSSO cover the fields of socio-economic, industrial and agricultural statistics. The socio-economic surveys are carried out annually on different subjects in collaboration with the State Statistical Bureaux. The subject programme conforms to a well defined cycle of surveys extending over a period of ten years. These include surveys on (i) demography, health and family welfare (ii) assets debt and investment (iii) land holdings and live-stock enterprises to be repeated once in ten years, (iv) employment, rural labour and consumer expenditure, and (v) unorganised enterprises in non-agricultural sector to be repeated once in five years. Surveys on other subjects of interests to users are either dovetailed with one of the foregoing surveys or taken in a year open to other topics.

The Annual Survey of Industries, covering over 50,000 manufacturing establishments registered under the Factories Act, 1948, provides information on capital investment, quantity and value of the goods manufactured, value added by manufacture, employment and emoluments. The collection of data is made by NSSO while the data are tabulated and results published by the Central Statistical Organisation. Industrial statistics are obtained under the Collection of Statistics Act, 1953.

In the field of agricultural statistics, NSSO provides technical guidance to the states for the conduct of crop estimation surveys. A scheme for improvement of crop statistics has been in operation since 1973-74 to help locate areas of weakness and to take necessary remedial measures.

An idea of the scale of survey operations NSSO undertakes can be had from the fact that the socio-economic surveys in each annual round cover about two lakh house-holds spread over 9,000 sample villages and 5,000 sample urban blocks. The check of area and yield of crops are spread over 5,000 sample villages and 15,000 crop-cutting experiments. State governments participate in the socio-economic and agricultural surveys, canvassing a matching sample of the same size as the central sample; some states do even more. In respect of ASI too, some states collect data from non-census factories, not covered in a given year by the NSSO.

The current socio-economic round (34 in the series—July 1979—June 1980) is being devoted to the survey on trade, transport, hotels, restaurants, storage and warehousing and services. The survey covers own-account enterprises employing no hired workers and small establishments with employment up to five workers, and value of output/turnover/receipts of less than Rs 1.00 lakh. A parallel enquiry on the lines of Annual Survey of Industries is also being conducted to cover the lesser establishments.

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

The NSSO, as a major fact finding body, occupies a unique position in the nation's statistical system. Over the years, it has enlarged and diversified the data base, specially, in areas which are vital for development planning.

The findings from the National Sample Surveys have been brought out in the form of individual reports, each covering a particular aspect for all the states. The NSSO has now a journal of its own, namely, *'Sarvekshana'* and the results are being published in the journal for individual states as and when they become available.

Prices

The index numbers of wholesale prices have been revised from base 1961-62=100 to 1970-71=100 and the old series were discontinued from April 1977.

In the revised classification, commodities are distributed under three major groups, namely (i) primary articles, (ii) fuel, power light and lubricants and (iii) manufactured products.

The first group has been further divided into three sub-groups namely, (i) food articles, (ii) non-food articles and (iii) minerals. The primary articles group is broadly comparable with the two groups of the old classification, *viz.*, "Food Articles" and "Industrial raw-materials" with certain minor adjustments.

The third group "manufactured products" contains sub-groups under which semi-manufactured and manufactured products have been classified. In the old classification, the group manufacturers was divided into two sub-groups "intermediate products" and "finished products".

Table 11.9 gives the index numbers of wholesale prices for the period 1971-72 and from 1974-75 to 1977-78 and September 1978 and September 1979 with revised base 1970-71 = 100.

Consumer Prices

The all-India working class consumer price index on base 1949=100 has been replaced by a new series of consumer price index numbers for industrial workers on base 1960=100 with effect from August 1968. Table 11.10 shows the consumer price index numbers for industrial workers for the period 1969-70 to 1977-78 along with indices for some selected centres which are among the 50 centres covered and a weighed average of whose indices yield the All India Index.

TABLE 11.10
CONSUMER PRICE INDEX NUMBERS FOR INDUSTRIAL WORKERS

(Base : 1960=100)

Year	Bombay	Ahmedabad	Calcutta	Madras[1]	Kanpur	Delhi	All India	
							All items	Food
1969-70 .	175	169	172	160	182	185	177	193
1970-71 .	182	176	182	170	190	199	186	204
1971-72 .	190	181	187	182	196	211	192	205
1972-73 .	203	198	197	203	212	222	207	223
1973-74 .	233	245	228	229	251	265	250	279
1974-75 .	289	305	288	301	323	337	317	358
1975-76 .	300	293	287	314	299	333	313	342
1976-77 .	298	281	297	288	294	332	301	317
1977-78 .	318	310	320	311	330	358	324	345
1978-79 .	325	323	331	318	337	368	331	347

[1]Figures for the period up to Janaury 1970 have been estimated from the old Consumer Price Index series for Madras city on base July 1935-June 1936=100. From February 1970 onwards, figures are from the Labour Bureau's New Series on base 1960=100.

TABLE 11·9

INDEX NUMBERS OF WHOLESALE PRICES

(Base : 1970-71=100)

Item	Weight	1971-72	1974-75	1975-76	1976-77	1977-78	1978-79	September 1978	September 1979
I. Primary articles	416·67	100·9	177·5	165·8	167·2	183·8	181·15	182·9	207·8
Food articles	297·99	101·1	172·1	163·6	155·3	173·6	172·4	175·0	189·7
Non-food articles	106·21	98·6	163·7	139·8	167·4	178·0	170.4	169·2	199·4
Fibres	31·73	106·6	160·8	139·8	184·9	185·2	169·3	167·0	170·4
Oil seeds	42·01	89·9	172·4	125·7	150·8	183·5	158·9	165·5	202·1
Minerals	12·47	115·4	423·5	440·4	449·4	477·0	490·7	485·9	711·7
II. Fuel, power, light and lubricants	84·59	105·9	198·3	219·2	230·8	234·3	244·7	245·4	296·0
III. Manufactured products	498·74	109·5	168·8	171·2	175·2	179·2	179·5	179·7	219·1
Food products	133·22	118·4	186·9	181·4	189·1	184·3	157·0	160·3	228·5
Beverages, tobacco and tobacco products	27·08	106·80	148·2	164·7	168·2	171·2	178·2	177·8	184·7
Textiles	110·26	109·6	159·8	147·3	155·3	172·8	179·0	177·8	206·0
Paper and paper products	8·51	110·4	184·8	183·2	180·1	184·5	196·0	191·0	236·3
Leather and leather products	3·85	115·7	184·0	207·9	227·8	228·2	265·4	258·6	355·0
Rubber and rubber products	12·07	101·7	140·0	156·9	157·2	156·9	181·9	181·6	208·9
Chemical and chemical products	55·48	101·5	168·8	175·6	171·4	172·8	177·2	176·5	197·1
Non-metallic mineral products	14·15	109·3	163·3	187·9	191·0	194·6	213·7	209·9	245·4
Basic metals, alloys and metal products	59·74	104·7	172·6	184·8	190·1	193·8	211·2	212·8	250·2
Machinery and transport equipment	67·18	105·3	156·4	172·6	170·1	172·6	183·9	182·0	214·2
Miscellaneous products	7·20	102·5	168·5	167·8	166·0	179·4	187·8	181·6	205·8
IV. All Commodities	1,000·00	105·6	174·9	173·0	176·6	185·8	185·8	186·6	220·9

BASIC ECONOMIC DATA
CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

Whereas in 1977-78, the all-India general index showed an increase of 23 points over that of the previous year, during 1978-79, the all-India general index rose by 7 points and the all-India food index by 2 points.

Table 11.11 gives the index numbers of consumer prices for urban non-manual employees for the period 1970-71 to 1978-79.

TABLE 11.11
CONSUMER PRICE INDEX NUMBERS EMPLOYEES

(Base :1960-100)

Year	Bombay	Calcutta	Madras	Delhi/ New Delhi	All India
1970-71 . .	168	170	175	174	174
1971-72 . .	172	174	188	180	180
1972-73 . .	183	180	203	190	192
1973-74 . .	204	204	231	217	221
1975-76 . .	246	243	306	273	277
1976-77 . .	255	251	294	274	277
1977-78 . .	269	265	311	291	296
1978-79 . .	285	279	321	303	306

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

12 FINANCE

PUBLIC FINANCE

The Power to raise and disburse public funds has been divided under the Constitution between the Government of India and state governments. There are thus more than one budget and more than one public treasury in the country. The sources of revenue for the union and the states are, by and large, mutually exclusive, if shareable taxes between them are excluded.

The Constitution provides that (i) no tax can be levied or collected except by authority of law, (ii) no expenditure can be incurred from public funds except in the manner provided in the Constitution, and (iii) the executive authorities must spend public money only in the manner sanctioned by Parliament in the case of the union and by the state legislature in the case of a state.

All receipts and disbursements of the union government are kept under two separate headings, namely, the Consolidated Fund of India and the Public Account of India. All revenues received, loans raised and money received in repayment of loans by the union government go to form the Consolidated Fund. No money can be withdrawn from this Fund except under the authority of an Act of Parliament. All other receipts and disbursement, such as, deposits, service funds and remittances go into the Public Account which is not subject to the vote of Parliament. To meet unforeseen needs, not provided in the Annual Appropriation Act, a Contingency Fund of India has also been established under article 267 (i) of the Constitution.

The Constitution also provides for the establishment of a Consolidated Fund, a Public Account and a Contingency Fund for each state.

The Railways, the largest public undertaking, have their own funds and accounts and their budget is presented separately to Parliament. The appropriations and disbursements under the railway budget are subject to the same form of parliamentary and audit control as other appropriations and disbursements.

Sources of Revenue

The main sources of union revenues are customs duties, union excise duties and the corporation and income taxes (excluding taxes on agricultural income). The revenue from the wealth tax accrues to the union. Since 1971-72, the value of agricultural property held by individuals and Hindu undivided families has also been brought under the purview of the Wealth Tax Act. However, the net proceeds of the wealth tax on agricultural property are passed on to the states as grants-in-aid. The Railways and Posts and Telegraphs also contribute to the general revenues of the union out of their net profits.

The main heads of revenue in the states are the taxes and duties levied by state governments, the share of taxes levied by the central government and grants received from the union. Land revenue, sales tax, state excise duties, registration and stamp duties and shares of income tax and union excise duties constitute more than four-fifths of the tax revenue and more than half of the total revenue receipts of the states. Property taxes and octroi and terminal taxes are the mainstay of local finance.

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

Whereas in 1977-78, the all-India general index showed an increase of 23 points over that of the previous year, during 1978-79, the all-India general index rose by 7 points and the all-India food index by 2 points.

Table 11.11 gives the index numbers of consumer prices for urban non-manual employees for the period 1970-71 to 1978-79.

TABLE 11.11
CONSUMER PRICE INDEX NUMBERS EMPLOYEES

(Base :1960-100)

Year	Bombay	Calcutta	Madras	Delhi/ New Delhi	All India
1970-71 . .	168	170	175	174	174
1971-72 . .	172	174	188	180	180
1972-73 . .	183	180	203	190	192
1973-74 . .	204	204	231	217	221
1975-76 . .	246	243	306	273	277
1976-77 . .	255	251	294	274	277
1977-78 . .	269	265	311	291	296
1978-79 . .	285	279	321	303	306

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

12 FINANCE

PUBLIC FINANCE

The Power to raise and disburse public funds has been divided under the Constitution between the Government of India and state governments. There are thus more than one budget and more than one public treasury in the country. The sources of revenue for the union and the states are, by and large, mutually exclusive, if shareable taxes between them are excluded.

The Constitution provides that (i) no tax can be levied or collected except by authority of law, (ii) no expenditure can be incurred from public funds except in the manner provided in the Constitution, and (iii) the executive authorities must spend public money only in the manner sanctioned by Parliament in the case of the union and by the state legislature in the case of a state.

All receipts and disbursements of the union government are kept under two separate headings, namely, the Consolidated Fund of India and the Public Account of India. All revenues received, loans raised and money received in repayment of loans by the union government go to form the Consolidated Fund. No money can be withdrawn from this Fund except under the authority of an Act of Parliament. All other receipts and disbursement, such as, deposits, service funds and remittances go into the Public Account which is not subject to the vote of Parliament. To meet unforeseen needs, not provided in the Annual Appropriation Act, a Contingency Fund of India has also been established under article 267 (i) of the Constitution.

The Constitution also provides for the establishment of a Consolidated Fund, a Public Account and a Contingency Fund for each state.

The Railways, the largest public undertaking, have their own funds and accounts and their budget is presented separately to Parliament. The appropriations and disbursements under the railway budget are subject to the same form of parliamentary and audit control as other appropriations and disbursements.

Sources of Revenue

The main sources of union revenues are customs duties, union excise duties and the corporation and income taxes (excluding taxes on agricultural income). The revenue from the wealth tax accrues to the union. Since 1971-72, the value of agricultural property held by individuals and Hindu undivided families has also been brought under the purview of the Wealth Tax Act. However, the net proceeds of the wealth tax on agricultural property are passed on to the states as grants-in-aid. The Railways and Posts and Telegraphs also contribute to the general revenues of the union out of their net profits.

The main heads of revenue in the states are the taxes and duties levied by state governments, the share of taxes levied by the central government and grants received from the union. Land revenue, sales tax, state excise duties, registration and stamp duties and shares of income tax and union excise duties constitute more than four-fifths of the tax revenue and more than half of the total revenue receipts of the states. Property taxes and octroi and terminal taxes are the mainstay of local finance.

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

Transfer of Resources

The devolution of resources from the union to the states is a salient feature of the system of federal finance in India. Apart from their share of taxes and duties, state governments receive statutory and other grants as well as loans for various development schemes and rehabilitation purposes. The total amount of resources transferred to the states during the Second Plan period was more than double of that during the First Plan period. It was nearly double again during the Third Plan and more than double in the Fourth Plan as shown in table 12.1.

TABLE 12-1 RESOURCES TRANSFERRED TO STATES

(*Rs crores*)

Period	Taxes and duties	Grants	Loans[1]	Total	Aggregate expenditures of state govts.	(4) as Percentage of (5)
	1	2	3	4	5	6
First Plan	352·5	214·8	637·9	1,205·2	3,351·9	36·0
Second Plan	710·1	700·4	1,037·9	2,440·4	5,845·9	41·7
Third Plan	1,196·0	1,302·9	2,151·2	4,650·1	10,719·5	43·4
1966-67	372·6	413·1	638·5	1,424·2	3,063·9	46·5
1967-68	415·7	479·0	492·5	1,387·2	3,221·0	43·1
1968-69	491·0	507·2	321·8	1,320·0	3,627·3	36·4
1969-70	621·3	531·2	398·2	1,550·7	4,039·1	38·4
1970-71	755·3	576·0	350·5	1,681·8	4,469·1	37·6
1971-72	941·9	875·9	366·2	2,184·0	5,305·7	41·2
1972-73	1,066·6	926·4	851·2	2,844·2	6,475·8	43·9
1973-74	1,162·4	937·2	619·0	2,718·6	7,259·5	37·4
Fourth Plan period	4,547·5	3,846·7	2,585·1	10,979·3	27,549·2	39·9
1974-75	1,228·5	1,021·6	569·8	2,819·9	8,004·2	35·2
1975-76	1,599·1	1,218·5	532·6	3,350·2	9,662·6	34·7
1976-77	1,679·8	1,505·2	726·9	3,911·9	11,016·8	35·5
1977-78 (RE)	1,820·1	1,880·4	1,183·5	4,884·0	12,677·2	38·5
1978-79(BE)	2,017·7	2,269·7	1,505·1	5,792·5	14,145·3	40·9

[1]Net of requirements. RE=Revised estimates. BE=Budget estimates,

Finance Commission

Under the Constitution, a Finance Commission is to be constituted every fifth year or at such earlier time as the President considers necessary to make recommendations to the President as to (i) the distribution between the union and the states of the net proceeds of taxes which are to be, or may be divided between them under the Constitution and the allocation between the states of the respective shares of such proceeds; (ii) the principles which should govern the grants-in-aid of the revenues of the states in need of such assistance out of the Consolidated Fund of India; and (iii) any other matter referred to the Commission by the President in the interest of sound finance. The recommendations of the Commission together with an explanatory memorandum as to the action taken thereon are laid before each House of Parliament. Seven Finance Commissions had been constituted since the commencement of the Constitution.

The Seventh Finance Commission, the latest, was constituted in June 1977. The Commission's recommendations cover a period of five years commencing from 1 April 1979. Besides, recommending devolution of taxes and duties and grants-in-aid to the states, (in need of assistance) the Commission, was asked to make an assessment of the non-plan capital gap of the states and suggest appropriate measures to deal with it. The Commission was also asked to review the policy and arrangements in regard to financing of relief expenditure by the

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

states affected by natural calamities. The Commission submitted its report in October 1978. All the recommendations of the Commission except those relating to grants-in-aid to compensate the loss in excise revenue consequent on the introduction of prohibition and conversion of outstanding small savings loans into "loans in perpetuity" have been accepted by the government. The Commission had raised the share of the states in income-tax pool from 80 to 85 per cent and doubled the share of the states in basic excise duties other than the duty on electricity. In the case of excise duty on electricity, the net proceeds were to be passed on to states from where they were collected. The Commission had recommended grants totalling Rs 1,173 crores during the period 1979—84 to eight states which were likely to have gap in their revenue account as per the Commission's assessment. In addition, the Commission had also recommended Rs 437 crores to 17 out of 22 states for upgradation of standards in certain sectors of administration like police, justice, revenue, district and tribal administration etc.

To enable the states to meet their non-plan capital gap, the Commission had recommended a scheme for relief in the repayment of outstanding central loans to the union government. It envisages write off of central loans to the extent of Rs 943 crores. The consolidation of outstanding central loans as on 31 March 1979 is expected to give a debt relief of Rs 2,156 crores to the states during the period 1979—84.

For financing relief expenditure, the Commission had made larger annual provisions in its re-assessment of the forecast on receipts and expenditure of the states. For drought relief expenditure in excess of the amount allowed by the Commission, the states are expected to make a contribution from their plan expenditure not exceeding 5 per cent. The requirement of states for drought relief expenditure over and above the annual amount permitted by the Commission and contribution of the states, is to be met by the central government by way of assistance, half as grant and half as loans. In case of natural calamities like floods, cyclones and others, the central government's relief assistance is to be made available as non-plan grant to the extent of 75 per cent of the total expenditure in excess of the annual amount provided in the Commission's assessment. The transfers under the Commission's award as per its estimates during the period 1979—84 would be of the order of Rs 23,063 crores.

Budgetary Position

Table 12.2 shows the budgetary position of the Government of India and table 12.3 gives the consolidated budgetary position of the states and union territories for selected years.

Annual Financial statement or Budget

An estimate of all anticipated revenue and expenditure of the union government for the ensuring financial year is laid before Parliament on the last working day of February every year. This is known as the 'Annual Financial Statement' or the 'Budget' and covers the central government's transactions of all kinds in and outside India occurring during the year in which the statement is prepared as well as the ensuing year or the Budget year as it is known.

The presentation of the Annual Financial Statement is followed by a general discussion on the budget in both the Houses of Parliament. The estimates of expenditure from the Consolidated Fund of India are then placed before the Lok Sabha in the form of 'Demands for Grants' Ordinarily, a separate 'Demand' is made for each Ministry. All withdrawals of money from the Consolidated Fund are thereafter authorised

TABLE 12·2

BUDGETARY POSITION OF THE GOVERNMENT OF INDIA[1]

(*Rs crores*)

Major head	1965-66	1970-71	1974-75	1975-76	1976-77	1977-78[2] (Revised)	1978-79[2] (Budget)
I. Revenue account							
A. Revenue	2,344·4	3,341·9	6,557·6	8,075·4	8,752·7	9,778·7	10,812·4 (10,461·4)
B. Expenditure	2,024·6	3,178·9	5,793·3	7,188·5	8,440·5	9,743·2	10,958·1
C. Surplus(+) or deficit(—)	+319·8	+163·0	+764·3	+886·9	+312·2	+35·5	—145·7 (—496·7)
II. *Capital account*							
A. Receipts [3][4]	1,646·3	2,524·2	3,296·7	4,697·3	5,572·8	6,158·6	7,198·8
B. Disbursements	2,138·9	2,972·0	4,781·8	5,950·2	6,015·7	7,168·9	8,590·3
C. Surplus (+) or deficit(—)	—492·6	—447·8	—1,485·1	—7,262·9	—442·9	—1,010·3	—1,391·5
III. *Over all Surplus*(+) *or deficit*(—)(*IC—IIC*)	—172·8	—284·8	—720·8	—366·0	—130·7	—974·8	—1,537·2 (—1,913·2)
Financed by :							
A. Increase in (—) treasury bills[5]	—218·3	—359·1	—780·0	—845·6	+341·8	—702·0	—1,049·0
B. Cash balances decrease (—) or increase (+)	+45·5	+74·3	+59·2	479·6	—472·5	—272·8	—1·0
(i) opening balance	—2·0	+156·0	+258·5	+317·4	+797·0	+324·5	+51·7
(ii) closing balance	+43·5	+230·3	+317·4	+797·0	+324·5	+51·7	+50·7
C. Uncovered	—	—	—	—	—	—	487·2

[1]The data from 1974-75 onwards given are not strictly comparable with those for earlier years due to changes in budgetary classification.
[2]Including effects of budget proposals and adjusted for the effects of tax concessions announced on 27 April 1978 and supplementary demands for grants for additional expenditure announced in August 1978. Figures in brackets reflect 1977-78 rates of taxation. [3]Excluding treasury bill receipts. [4]Excluding conversion of *ad-hoc* treasury bills of Rs 50 crores in 1965-66, Rs 75 crores in 1970-71 and Rs 100 crores in 1972-73 1974-75, 1975-76, 1976-77 and 1977-78 (revised estimates) into dated securities. [5]Mostly sold to Reserve Bank.

Source : Reserve Bank of India Bulletin, July 1978.

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

TABLE 12·3

CONSOLIDATED BUDGETARY POSITION OF STATES AND UNION TERRITORIES

(*Rs crores*)

Major head	1950-51	1960-61	1965-66	1975-76	1976-77	1977-78 (Revised)	1978-79 (Budget)
I. *Revenue account*							
Revenue	375·8	1,041·4	1,867·1	7,474·8	9,037·0	9,930·9	11,049·4
Expenditure	373·8	1,016·2	1,901·2	6,521·9	7,940·2	9,253·6	10,216·5
Surplus(+) or deficit(—)	+2·0	+25·2	--34·1	+952·9	+1,096·8	+677·3	+832·9
II. *Capital account*							
Receipts	112·6	427·8	928·6	1,055·6	2,884·5	3,433·8	3,614·0
Disbursements	99·2	452·0	982·5	2,091·0	3,931·7	4,400·7	4,816·7
Surplus(+) or deficit(—)	+13·4	—24·2	—53·9	—1,035·4	—1,047·2	—966·9	—1,202·7
III. *Overall surplus* (+)*or deficit* (—)	+15·4	+1·0	—88·0	—82·5	+49·6	—289·6	—369·8
Financed by :							
A. Ways and means advances from Reserve Bank of India (net)	4·6	+3·2	+14·0	—32·3	+82·9	+6·9	—13·5
B. Drawals from cash balances	—10·8	—4·2	+74·0	+114·8	—33·3	—296·5	—356·3

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

by an Appropriation Act passed by Parliament every year. The tax proposals of the Budget are embodied in another bill which is passed as the 'Finance Act' of the year.

Estimates of receipts and expenditure are similarly presented by state governments to their legislatures before the beginning of the financial year and legislative sanction for expenditure is secured through similar procedure.

Audit

The Comptroller and Auditor General who is independent of the executive, audits the receipts and expenditure of the central and state governments and his reports on the accounts are submitted to the President/governor for having them laid before Parliament/legislature.

Budget Estimates 1979-80

The budget estimates for 1979-80 as presented to Parliament on 28 February 1979 placed expenditure on revenue account at Rs 13,817 crores including states' share of union excise duties, as compared to Rs 12,388 crores (revised) in 1978-79 and revenue at Rs 13,605 crores (including the unions' share of the proposed additional taxation amounting to Rs 435 crores) as compared to Rs 12,259 crores (revised) in the previous year, resulting in anticipated deficit of Rs 212 crores. After taking into account the capital transactions, the overall deficit amounts to Rs 1,381 crores (after allowing for the post-budget concessions).

Income Tax

Table 12.4 gives the incidence of income tax at selected levels of income of individuals at 1979-80 tax rates.

TABLE 12.4 INCIDENCE OF INCOME TAX AT SELECTED LEVELS

Income (Rs)	Tax (including surcharge at the rate of 20 per cent) (Rs)	Effective rate (%)
10,000	Nil	Nil
11,000	360	3·27
12,000	720	3·00
12,500	810	6·48
15,000	1,260	8·40
20,000	2,340	11·70
25,000	3,840	15·36
30,000	5,640	18·80
40·000	10,440	26·10
50,000	15,240	30·48
60,000	21,240	35·40
70,000	27,240	38·91
80,000	33,840	42·30
90,000	40,440	44·93
1,00,000	47,040	47·04
1,50,000	83,040	55·36
2,00,000	1,19,040	59·52
2,50,000	1,55,040	62·02
3,00,000	1,91,040	63·68
5,00,000	3,35,040	67·01
10,00,000	6,95,040	69·50

With a view to directly checking the expansion of demand by curtailing disposable income in the hands of certain classes of people the compulsory deposit scheme has been extended for another two years, *i.e.*, for the assessment years 1980-1981 and 1981-82.

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

Direct Taxation

The number of persons paying direct tax, as on 31 March 1979, was 39.73 lakhs. Net collections from income tax and corporate tax in 1978-79 amounted to Rs 2,428 crores; from wealth tax Rs 54.97 crores; from gift tax Rs 5.74 crores and estate duty Rs 13.09 crores.

Taxation Laws (Amendment) Act 1975

The Taxation Laws (Amendment) Bill, 1973, which was introduced in Parliament in May 1973 to give effect to several recommendations made by the Direct Taxes Enquiry Committee (Wanchoo Committee), was enacted as the Taxation Laws (Amendment) Act, 1975. This Act has brought on the statute various provisions for preventing tax evasion and proliferation of black money. Deterrent punishments have been provided for tax evasion. In cases where tax evasion exceeds Rs 1 lakh or prosecution is for the second or subsequent offence, the maximum punishment prescribed is seven years' rigorous imprisonment. The discretion vested in courts to award monetary punishment as an alternative to imprisonment or to reduce the term of imprisonment less than the minimum period, has been taken away. The scope of tax fraud has also been extended to cover wilful attempt to evade tax or even payment thereof.

With a view to bringing about simplification and rationalisation of the direct tax laws, the government appointed a committee of experts known as the "Direct Tax Laws Committee" in June 1977. The Committee (Chokshi Committee) presented its interim report in December 1977 and the final report in October 1978. The recommendations of the Committee are being processed for implementation.

Special Legislation for confiscation of Smugglers' Properties

The Smugglers and Foreign Exchange Manipulators (forfeiture of property) Act, 1976 received the assent of the President on 25 January 1976. The objective of the Act is to combat the menace of smuggling and foreign exchange racketeering in the country. It seeks to forfeit the illegally acquired properties (movable and immovable) of the smugglers, foreign exchange manipulators and of their relatives and associates.

Under the Act, five competent authorities with their headquarters at Delhi, Madras, Bombay, Calcutta and Ahmedabad have been appointed for implementation of the Act. Up to 31 January 1980 these authorities issued 1,900 notices and the value of the properties forfeited was about Rs 8.89 crores.

PUBLIC DEBT

The outstanding public debt of the Government of India was estimated at Rs 29,691.53 crores at the end of 1978-79 and is estimated to be Rs 34,115.97 crores at the end of 1979-80. Table 12.5 gives an analysis of the public debt outstanding at the end of selected years since 1950-51. Table 12.6 shows the debt position of state governments whose total liability aggregated to Rs 18,382 crores.

MONEY SUPPLY AND CURRENCY

Money supply comprises currency with the public and such of the deposit money with the banking system, including the Reserve Bank of India, as is withdrawable 'On demand'. The total supply of money with the public thus stood at Rs 20,807 crores at the end of 1978, of which currency with the public accounted for Rs 9,455 crores and deposit money Rs 11,352 crores. In 1978, money supply registered an increase of Rs 3,055 crores as compared with a rise of Rs 2,547 crores in 1977. Component-wise, both currency with the public and deposit money recorded increases of Rs 1,045 crores and Rs 2,010 crores respectively during 1978 as compared with the rise of Rs 1,092 crores

TABLE 12·5

PUBLIC DEBT OF THE GOVERNMENT OF INDIA

(*Rs crores*)

Major head	At the end of					
	1950-51	1960-61	1965-66	1977-78	1978-79 (Revised)	1979-80 (Budget)
I. Debt raised in India						
(a) *Permanent debt*						
(i) Current loans	1,438·46	2,555·72	3,417·28	9,219·18	10,872·57	12,723·06
(ii) Compensation bonds	—	—	—			
(iii) Prize bonds	—	15·63	11·35	125·20	125·04	118·21
(iv) 15-year annuity certificates	—	3·45	3·78			
(v) Loans in course of repayment	6·49	22·73	33·72	50·48	50·48	50·48
TOTAL PERMANENT DEBT	1,444·95	2,597·53	3,466·13	9,394·86	11,048·09	12,891·75
(b) *Floating debt*						
(i) Treasury bills	358·02	1,106·29	1,611·82	8,618·83	8,037·83	10,012·83
(ii) Special floating loans	212·60	274·18	340·70	1,018·56	1,232·35	1,233·49
(iii) Treasury deposit receipts and other floating lons	6·73	—	—	—	—	—
TOTAL FLOATING DEBT	577·35	1,380·47	19,52·52	9,637·39	9,270·18	11,246·32
TOTAL DEBT RAISED IN INDIA	2,022·30	3,978·00	5,418.65	19,032·25	20,318·27	24,138·07
II. Debt raised outside India	32·03	760·96	2,590·62	8,984·74	9,373·26	9,977·90
TOTAL PUBLIC DEBT	2,054·33	4,738·96	8,009·27	28,016·99	29,691·53	34,115·97

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

TABLE 12·6

DEBT POSITION OF STATES

(*Rs crores*)

Major head	As at the end of							
	1951-52	1965-66	1971-72	1974-75	1975-76	1976-77	1977-78 (Revised)	1978-79 (Budget)
I. Public debt[1]								
(i) Permanent debt . .	134	827	1,332	1,840	2,112	2,293	2,466	2,673
(ii) Floating debt[2] . .	16	189	621	159	151	68	62	75
(iii) Loans from central government	241	4,110	6,732	9,148	9,681	10,408	11,591	13,096
(iv) Other debt[3] . .	—	162	258	405	495	587	628	687
II. Unfunded debt[4] . . .	58	231	627	993	1,142	1,343	1,587	1,851
TOTAL	449	5,519	9,570	12,545	13,581	14,699	16,334	18,382

1 Represents current and expired loans floated in the market and zamindari-jagirdari abolition bonds.

2 Represents mainly ways and means advances from the Reserve Bank of India.

3 Includes loans from the National Agricultural Credit (long term operations) Fund of RBI, Khadi and Village Industries Commission, Employees' State Insurance Corporation, State Bank of India, etc.

4 Includes state provident funds, postal insurance and life annuity funds, family pension fund, staff benefit fund and special loans consisting generally of endowments for specific purposes of a religious and charitable nature.

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

and Rs 1,455 crores respectively in 1977. The trends in money supply and its components since 1970 are indicated in table 12.7.

During 1978, the expansion of money supply with the public at Rs 3,055 crores was higher than that of Rs 2,547 crores recorded during 1977. The higher growth of money supply during 1978 was brought about largely by a substantially larger increase of Rs 4,068 crores in bank credit to commercial sector compared with the increase of Rs 2,467 crores in the previous year. The increase of Rs 1,975 crores in net bank credit to government sector in 1978 was also higher than that of Rs 1,594 crores in 1977. The expansionary impact of these factors on money supply was partly off set by smaller increases in net foreign exchange assets of banking sector (Rs 1,078 crores compared with Rs 2,026 crores last year) and government's currency liabilities to the public (Rs 6 crores compared with Rs 30 cores last year) and a larger increase in non-monetary liabilities of banking sector, which is a contractionary factor in money supply, by Rs 4,072 crores compared with Rs 3,570 crores in the previous year.

TABLE 12.7
MONEY SUPPLY WITH PUBLIC

(Rs crores)

End of December	Currency with the public		Deposit money with the public		Money supply with the public	
	Amount	Annual variation	Amount	Annual variation	Amount	Annual variation
1970	4,157	—	2,808	—	6,965	—
1971	4,563	+406	3,350	+542	7,913	+948
1972	4,907	+344	4,052	+702	8,959	+1,046
1973	5,778	+871	4,716	+664	10,494	1,535
1974	6,138	+360	5,425	+709	11,563	+1,069
1975	6,443	+305	6,210	+785	12,653	+1,090
1976	7,318	+875	7,887	+1,677	15,205	+2,552
1977	8,410	+1,092	9,342	+1,455	17,752	+2,547
1978[1]	9,455	+1,045	11,352	+2010	20,807	+3,055

[1]Provisional

Note : Commencing from 5 August 1977, compilation of money supply data has been revised on the basis of the report of the second Working Group on Money supply : Concepts, Compilation and Analysis 1977. The new series of money supply data give a wider coverage of the cooperative banking institutions and are available from the last week of March 1970. These are not comparable with the data for earlier years.

Currency

During 1978, currency in circulation[1] registered an expansion of Rs 1,220 crores (to Rs 10,179 crores) as compared with Rs 1,191 in the preceding year. From 1970 to 1978 currency in circulation expanded by Rs 5,842 crores or by 134.7 per cent.

Of the expansion of Rs 1,220 crores in currency in circulation during 1978, bank notes accounted for an increase of Rs 1,214 crores, the expansion in 1977 under this head being Rs 1,161 crores. Rupee coins in circulation (including one rupee notes) recorded a marginal increase of Rs 24 crores as against an increase of Rs 23 crores in the preceding year. However, the increase in the circulation of small coins during 1978 was lower at Rs 4 crores compared with that of

[1]Figures are inclusive of notes, rupee coins (including one rupee notes) and small coins held by banks and at treasuries but exclusive of Rs 43 crores of Indian notes received from Pakistan and awaiting cancellation.

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

Rs 7 crores in 1977. At the end of 1978, bank notes, rupee coins (including one rupee notes) and small coins in circulation stood at Rs 9,584 crores, Rs 355 crores and Rs 240 crores respectively.

BANKING

The commercial banking system in India consisted of 131 scheduled[1] commercial banks and five non-scheduled commercial banks at the end of June 1979, the former accounting for 99.9 per cent of the aggregate banking business in the country. Of the 131 scheduled commercial banks, 70 are in the public sector. In terms of business, pubilc sector banks occupy a dominating position, their share in the entire banking system being about 85 per cent.

Table 12.8 shows some important indicators in regard to progress of commercial banking in recent years.

Amongst the public sector banks, the State Bank is the biggest unit. Apart from the main State Bank, there are 7 other banks associated with it as associate banks. The State Bank and its associate banks account for roughly 31 per cent of the aggregate banking business in the country and 36 per cent of the business conducted by the public sector banks. The other 14 banks in the public sector are known as 'nationalised' banks. They came into the public sector on 19 July 1969. The main objective of nationalisation was to use financial institutions as the instrument for promoting economic and social development in a more purposive manner. Ever since nationalisation there has been a rapid growth of the banking network.

Branch Expansion

The largest number of new branches opened in any year, prior to nationalisation, was 677 in 1968. The number of new branches opened in the years subsequent to nationalisation was 1,369 in 1969, 2,137 in 1970, 1,805 in 1971, 1,763 in 1972, 1,782 in 1973, 1,693 in 1974, 2,334 in 1975, 3,217 in 1976, 3,348 in 1977 and 1,024 as on 30 June 1978.

As against 8,262 branches at the end of June 1969, the total number of commercial bank branches at the end of June 1979 was 30,202. The average population per branch for the country as a whole has been brought down from 64,000 in June 1969 to 22,000 by the end of June 1979.

Coverage of Rural Centres

In the selection of centres for opening new branches, there has been a deliberate emphasis on covering potential centres in rural and semi-urban areas, particularly unbanked centres. The number of branches located in rural areas was 1,860 at the end of June 1969, rose to 13,644 in September 1979 accounting for 44.6 per cent of the total branch net work. The total number of rural branches of the public sector banks increased from 1,523 to 11,192 during the same period.

Regional Rural Banks

To meet the credit requirements of weaker sections, small and marginal farmers, landless labourers, artisans and small entrepreneurs, the regional rural banks were established. There are 60 such banks functioning in different parts of the country. As on 31 August 1979, they

[1]According to a notification under the Reserve Bank's Act, banks which have not less than Rs 5 lakhs capital and reserve can alone be scheduled to the Reserve Bank

TABLE 12·8

PROGRESS OF COMMERCIAL BANKING

Important indicators	June 1969	June 1973	June 1974	June 1975	June 1976	June 1977	June 1978	June 1979
1	2	3	4	5	6	7	8	9
Number of commercial banks	89	83	83	83	100	126	128	136
(i) Scheduled commercial banks	73	74	74	74	92	119	122	131
(ii) Regional rural banks .	—	—	—	—	19	47	48	56
(iii) Non-scheduled commercial banks . .	16	9	9	9	8	7	6	5
Number of offices in India . .	8,262	15,362	16,936	18,730	21,220	24,802	28,016	30,202
Population[1] per office (in thousand)	64	37	35	32	29	25	23	22
Aggregate deposits of scheduled commercial banks (Rs crores)	4,646	9,165	10,756	12,545	15,178	18,903	23,312	27,869
Aggregate credit of scheduled commercial banks (Rs crores) .	3,599	6,412	7,858	8,955	11,476	13,491	15,694	18,538
Per capita[1] deposits of scheduled commercial banks (Rs) . .	88	160	183	210	249	305	363	415[2]
Per capita[1] credit of scheduled commercial banks (Rs) . .	68	112	134	150	188	217	245	280[2]
Deposits as percentage of national income (at current prices)[3] .	15·5	21·4	20·0	19·9	23·3	27·1	30·4	N.A.

[1]Based on mid-year population figures estimated by the Registrar General, India.

[2]Relates to December 1978.

[3]Relates to end-March.

N.A.—Not available.

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

had mobilised deposits of Rs 104.6 crores involving 22.96 lakh accounts. Since their inception, they had disbursed Rs 80.4 crores involving 8.5 lakh accounts. Small and marginal farmers landless labourers were given Rs 51.1 crores and the rural artisans got Rs 24.9 crores.

Lead Bank Scheme

The Lead Bank Scheme was evolved towards the end of 1969 to give concrete shape to the idea of 'area approach' in the development of banking. To enable the banks to assume the role of leadership in an effective and systematic manner, all the districts of the country, except Calcutta, Greater Bombay and Madras, and the union territories of Chandigarh, Delhi and Goa, Daman and Diu were allotted among the public sector banks and three selected private banks. Each of these banks is expected to provide leadership to the other banks and financial institutions located in the districts allotted to it.

The year 1974 witnessed the conclusion of the first phase of the Lead Bank Scheme with the completion of the surveys of all the districts covered under the scheme. District level coordination committees, organised under the Lead Bank Scheme to achieve greater coordination among all the financial institutions meet regularly.

Having completed the basic task of surveying their lead areas and establishing forums for achieving a greater degree of coordination, the lead banks have now started devoting greater attention to the formulation of suitable schemes for implementation in their lead districts. The scheme has been extended to Goa, Daman and Diu.

Deposit Mobilisation

Deposits of all scheduled commercial banks stood at Rs 30,836 crores on 28 December 1979 as compared to Rs 5,275 crores at the end of June 1970. During 1979, the deposits rose by Rs 4,285 crores, a growth of 16.1 per cent. The deposits of public sector banks increased from Rs 4,083 crores at the end of December 1969 to Rs 25,978 crores as on 28 December 1979.

Deposit Insurance and Credit Guarantee Corporation

To provide a measure of protection to the small depositors, the Deposit Insurance Corporation was established on 1 January 1962 by an Act of Parliament. Every commercial bank in India and every eligible cooperative bank in any of the states and union territories to which the Deposit Insurance Corporation Scheme has been extended by the central government is registered as an insured bank. Insured banks are required to pay to the Corporation a premium at the existing rate of 4 paise per annum for every hundred rupees of their assessable deposits. The present limit of insurance cover is Rs 20, 000 to a depositor in respect of deposits held by him in an insured bank. There were 127 insured commercial banks (including 49 regional rural banks) and 894 insured cooperative banks as on 31 December 1978.

The Credit Guarantee Corporation of India Limited was set up in January 1971 under the Companies Act, 1956 to operate a scheme of credit guarantee to encourage the banks to undertake financing of small borrowers on a much larger scale without excessive risks. The Corporation operated three types of guarantee schemes *viz.* (i) small loans guarantee scheme; (ii) small loans (financial corporation) guarantee scheme and (iii) service cooperative societies guarantee scheme.

In May 1978, the Credit Guarantee Corporation of India Limited, was merged with the Deposit Insurance Corporation, by an Act of Parliament, in order to serve better and provide credit guarantee to

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

commercial banks. The undertaking has been renamed as the Deposit Insurance and Credit Guarantee Corporation.

Use of Banks' Resources

Two main uses to which deposit resources of commercial banks deployed are (i) investment in government and other approved securities, and (ii) loans and advances commonly known as 'bank credit'.

Bank Credit

Advances of scheduled commercial banks, which stood at Rs 3,616 crores on 31 December 1969, increased to Rs 20,586 crores by the end of 31 December 1979. Public sector banks' advances increased from Rs 3,003 crores to Rs 17,286 crores during the same period.

Export Credit

Credit to export sector continues to enjoy a high priority in the scheme of credit deployment outlined by the Reserve Bank. Banks provide export credit at a maximum rate 11.0 per cent for stipulated period. Export Credit on deferred payment basis is extended at a maximum interest rate of 8 per cent per annum for the prescribed period. The quantum of outstanding export credit granted by the scheduled commercial banks was Rs 1,218 crores at the end of July 1978.

There has been further liberalisation in the operation of the export credit. The Reserve Bank has taken the following steps :

(i) Banks have been advised to consider granting suitable credit facilities to consultancy firms even where consultancy services alone are exported and to exporters who have to send their products abroad for exhibition before sale; (ii) to industries where a substantial part of output is meant for export or new potential for export could quickly be built up; (iii) in cases where exporter is not able to execute the original contract due to circumstances beyond his control; (iv) to provide pre-shipment credit to carpet exporters not only from the time finished goods are ready for export but also at earlier stages to cover the raw material and other costs incurred in the process of manufacture; and (v) to allow the benefit of concessional pre-shipment credit to be shared between the export house/agency having the contract and the sub-supplier.

With a view to streamlining and simplifying procedure relating to exports on deferred payment terms, general permission has been granted by the Bank to exporters to make offers and enter into negotiations for export of capital goods provided certain specific conditions are fulfilled in cases where—(i) contract value does not exceed Rs 50 lakhs (ii) the contract period does not exceed 5 years and (iii) IDBI assistance is not required. IDBI has been made the focal point for grant of approval for other deferred payment contracts. From 1 February 1976 the Bank has introduced a Duty Drawback Scheme under which banks will grant interest-free advances up to 90 days to exporters against their entitlements for duty drawbacks as provisionally certified by customs authorities.

Credit Authorisation Scheme

To ensure proper use of bank credit, the Credit Authorisation Scheme was introduced by the Reserve Bank of India in 1965. Under the scheme, all the scheduled commercial banks are required to obtain the Reserve Bank's prior authorisation before sanctioning and fresh credit limits (including commercial bill discounts but excluding letters of credit and guarantee limits) of Rs 2 crores or more in respect of private sector undertakings and Rs 3 crores or more for public sector undertakings to a single party or any limit that would take the total limit

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

enjoyed by such party from the entire banking system (including co-operative sector) to Rs 2 to 3 crores as the case may be on secured or insecured basis. The scheme also covers individual term credit limits exceeding Rs 25 lakhs as well, where the term of repayment exceeds three years, irrespective of the totality of credit limits available to the party from the entire banking system.

On a review of the working of the scheme, the Reserve Bank effected, in May 1978, certain modifications with a view to further streamlining the procedures, delegating more authority to the banks themselves, introducing greater flexibility and facilitating quick decisions. The scope of exemption from the Reserve Bank's prior authorisation was modified as under.

Whenever an application is made to the Reserve Bank of India for authorisation for higher limits, banks may release, pending authorisation, an amount up to Rs 25 lakhs as hitherto. If 10 per cent of the authorised working capital limit (i.e. excluding the categories of limits exempted from prior authorisation) exceeds Rs 25 lakhs, banks may allow up to that amount (i.e. 10 per cent) subject to an overall ceiling of Rs 50 lakhs; or banks may allow temporary excess drawings in the limits for short periods, or may allow temporary facilities for a maximum period of three months, without prior authorisation up to 10 per cent of the authorised working capital limits or Rs 50 lakhs, whichever is less.

The total facilities under these two heads by all the financing banks should not exceed Rs 50 lakhs. Such facilities sanctioned by banks other than temporary excess drawings for short periods should be immediately reported to the Reserve Bank of India.

Term loans up to Rs 50 lakhs from the entire banking system in a period of a year (July-June) to a borrower engaged in industries listed under high-priority category for investment in capital assets would not require prior authorisation, irrespective of whether the party is covered under the Credit Authorisation Scheme or not.

Term loans allowed on a *pari passu* basis with the Industrial Finance Corporation of India (IFCI) and/or the Industrial Credit and Investment Corporation of India Ltd. (ICICI), have been exempted from the requirements of prior authorisation, besides those to be allowed on a *pari passu* basis with the IDBI and the ARDC.

Banks were advised that all individual term loan proposals for amount exceeding Rs 50 lakhs should normally be made in consultation with the IDBI or other concerned term-lending institutions. If the IDBI or the IFCI or the ICICI participates in the term loans, prior authorisation will not be required, but, if there is no participation of any of the aforesaid terms-lending institutions, prior authorisation is required.

In cases where the share of the banking system in term loans and deferred payment guarantee facilities to be allowed for a project is more than Rs 25 crores, prior authorisation, therefore, would be required hereafter, though the term loans, etc., may be allowed in participation with the IDBI, the IFCI or the ICICI or the ARDC.

Advances to Priority Sectors

The extension of credit to small borrowers in the hitherto neglected sectors of the economy is one of the principal tasks assigned to the public sector banks. To achieve this objective the banks have drawn up schemes to extend credit to small borrowers in sectors like agriculture,

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

small-scale industry, road transport, retail and small business, which traditionally had very little share in the credit extended by the banks. The number of borrowal accounts with the public sector banks for these categories of borrowers increased from 8.47 lakhs to 97 lakhs between June 1970 and June 1979. The amount outstanding during the same period increased from Rs 747 crores to Rs 5,200 crores. The share of these sectors in the total credit at the end of June 1979 was 32.9 per cent against 20.9 per cent in June 1970.

Bank Finance for Agriculture

Table 12.9 shows the achievements of the public sector banks in stepping up the flow of credit to various priority sectors.

To step up the flow of credit to the agricultural sector, public sector banks have extended their geographical coverage, strengthened technical field staff and organisational structure, introduced special schemes and simplified application forms and lending procedures. They are concentrating their efforts in compact areas through intensive programmes. As part of the strategy of 'area approach', the State Bank of India and its associate banks have opened 384 agricultural development branches and financed 11 lakh farmers up to 31 December 1978 with total outstanding of Rs 274.7 crores. Other banks are also adopting villages, to extend financial assistance. They had adopted 77,000 villages and financed 18.68 lakh farmers to the extent of Rs 394.95 crores.

TABLE 12.9
CREDIT FLOW TO PRIORITY SECTORS

Sector	No. of borrowal Accounts (in lakhs)		Amount outstanding (Rs crores)	
	June 1969	June[1] 1979	June 1969	June[1] 1979
Agriculture (excluding plantations)				
(i) Direct finance	1·60	59·82	40·21	1,683·88
(ii) Indirect finance	0·04	9·37	122·12	557·39
Small scale industry[2]	0·51	5·88	251·07	2,061·42
Road and water transport operators	0·02	2·24	5·49	386·89
Retail trade and small business	0·33	13·16	19·37	415·74
Professional and self-employed	0·08	6·76	1·91	119·36
Education	0·01	0·35	0·80	7·71
TOTAL	2·60	97·59	440·97	5,232·39

[1]Provisional.
[2]Number of units.

Banks have ensured that small and marginal farmers and agricultural labourers are not denied bank finance for their genuine credit requirements for want of adequate security and their credit needs are met on priority basis.

The scheme of financing primary agricultural credit societies by commercial banks has been extended to more states and is now in operation in Assam, Andhra Pradesh, Bihar, Haryana, Jammu and Kashmir, Karnataka, Madhya Pradesh, Maharashtra, Orissa, Tripura, Uttar Pradesh and West Bengal.

The total number of directly financed agricultural accounts increased from 1.6 lakhs in June 1969 to 59.8 lakhs in June 1979.

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

The total quantum of outstanding credit against these borrowal accounts increased from Rs 40 crores to 1,684 crores during the same period.

Small Scale Industries

Small-scale industries constitute an important segment of the priority sector. The outstanding advances of public sector banks to these industries in June 1979 which stood at Rs 2,061 crores covering 5.88 lakh borrowing units.

Co-ordination among Public Sector Banks

For better co-ordination among public sector banks and administrative agencies of the state governments six regional consultative committees, consisting of representatives of state governments and union territories and chairmen of nationalised banks have been constituted. These committees review banking developments in their respective regions. Similarly, state-level co-ordination committees have been set up.

Differential Interest Rate Scheme

To help the weaker sections of society, a scheme of differential interest rate has been in operation since 1972. Under the scheme public sector banks make funds available to certain categories of borrowers in industrially backward districts at a concessional rate of 4 per cent for their productive endeavours.

As at the end of March 1979, these banks had assisted 17.57 lakh borrowers and the amount outstanding was Rs 10.31 crores.

Foreign Branches of Indian Banks

One hundred and twenty one branches of 11 Indian commercial banks were operating in foreign countries at the end of 1979, the largest concentration being the UK, USA, Fiji, Kenya, Hong Kong, Mauritius and Singapore. These banks mainly cater to the demands of trade and commerce between India and these countries and also meet the needs of the sizeable population of Indian origin in these countries.

RESERVE BANK

Prior to the establishment of the Reserve Bank of India in 1935, the Imperial Bank of India, though primarily a commercial bank, performed certain central banking functions and in particular acted as a banker to Government.

The Reserve Bank was originally constituted as a shareholders' institution with a share capital of Rs 5.00 crores. The capital has remained unchanged to this day. The entire share capital was, in the beginning, owned by private shareholders with the exception of shares of the nominal value of Rs 2.2 lakhs, which were allotted to the central government. Subsequently the entire share capital of the Bank was acquired by the central government against compensation to the shareholders and from 1 January 1949, it became a state-owned institution.

Functions

The main function of the Bank is to regulate the issue of Bank notes and keep reserves for securing monetary stability. The Bank is the sole authority for the issue of currency in India other than one rupee coins/notes and subsidiary coins. As the agent of the central government, it undertakes the distribution of one rupee notes and coins as well as small coins issued by the Government of India.

The Bank acts as banker to Government of India, state governments, commercial banks and to some of the financial institutions including state co-operative banks. It formulates and administers

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

monetary policy in order to influence the level or aggregate demand for goods and services by varying the cost and availability of credit. The Reserve Bank also plays an important role in the maintenance of the exchange value of the rupee, and acts as an agent of the government in respect of India's membership of the International Monetary Fund. The Bank now performs a variety of developmental and promotional functions.

The general superintendence and direction of the Bank's affairs is vested in the Central Board of Directors. The Board comprises of the Governor, Deputy Governors and other Directors (including one official) nominated by the Government of India. The Governor is the chairman of the Board and the chief executive authority of the Bank.

CORPORATE SECTOR

The number of joint stock companies—both government and non-government, incorporated under the Companies Act 1956 and at work in India as on 31 March 1979 was 52,527. Of these, 51,051 companies were limited by shares, 62 were companies with unlimited liability and 1,414 were limited by guarantee and were associations not for profit. The 51,051 companies limited by shares had a paid-up capital of Rs 11,878.1 crores comprising 8,214 public limited and 42,837 private limited companies with a paid-up capital of Rs 3,540.7 crores and Rs 8,337.4 crores respectively.

Table 12.10 shows the number and paid-up capital of companies (government and non-government taken together) functioning in 1951, 1961, 1971 and 1974 onwards and up to 31 March 1979.

Table 12.11 shows the region/statewise distribution of companies limited by shares at work, and of the new companies registered, on the basis of the location of their registered offices during 1978-79.

3,537 companies were registered during the year 1978-79. Of these 3,488 were companies limited by shares, 15 were companies with unlimited liability and 34 were companies limited by guarantee and association not for profit. Of the companies limited by shares 254 were public limited and 3,234 were private limited having an authorised capital of Rs 150.5 crores and Rs 229.2 crores respectively.

Capital Issues and Projects Costs

During 1978-79, 80 non-government non-financial public limited companies issued capital through prospectuses amounting to Rs. 57.87 crores. Of this Rs 54.59 crores were issued in the form of equity share capital, Rs 1.28 crores as preference shares and Rs 2.00 crores as bonds. As compared to this an equal number of companies had issued capital amounting to Rs 71.71 crores—Rs 68.92 crores in the form of equity shares Rs 2.77 crores as preference shares and Rs 0.2 crores as bonds during 1977-78. One company each issued debentures during the year 1977-78 and 1978-79. There was thus, a decrease in the amount of capital issued to the tune of Rs 13.84 crores during 1978-79. Out of the total capital issued during 1978-79, Rs 46.50 crores (80.4 per cent) was offered to the public, of which Rs 33.58 crores (72.2 per cent) was underwritten. The total project cost of these companies issuing capital during 1978-79 was estimated to be about Rs 233.17 crores as compared to Rs 329.86 crores in the preceding year.

TABLE 12·10

COMPANIES AT WORK

As on 31 March	Companies limited by shares						Companies with unlimited liability (number)	Companies limited by guarantee and association not for profit (number)
	Public		Private		Total			
	Number	Paid-up capital (Rs crores)	Number	Paid-up capital (Rs crores)	Number	Paid-up capital (Rs crores)		
1951	12,568	566·5	15,964	208·9	28,532	775·4	—	1,213
1961	6,702	948·2	19,447	870·3	26,149	1,818·5	—	1,169
1971	6,690	2,091·5	23,632	2,422·2	30,322	4,513.7	—	1,220
1974	7,218	2,572·4	30,267	5,058·6	37,485	7,631·0	1	1,294
1975	7,485	2,799·8	33,099	5,401·0	40,584	8,200·8	4	1,326
1976[1]	7,708	3,004·6	35,557	6,437·0	43,265	9,441·6	15	1,337
1977[1]	7,858	3,146·3	37,774	7,401·9	45, ·632	10,548.2	43	1,356
1978[1]	8,025	3,374·9	39,930	8,649·4	47,955	12,024·3	47	1,381
1979[1]	8,214	3,540·7	42,837	8,337·4	51,051	11,878·1	62	1,414

[1]Provisional.

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

TABLE 12·11

REGION/STATEWISE DISTRIBUTION OF COMPANIES LIMITED BY SHARES AT WORK

Region/State	Companies at work as on 31-3-1979		Companies registered during April '78 to March '79	
	Number	Paid-up capital (Rs crores)	Number	Authorised capital (Rs crores)
1	2	3	4	5
Eastern Region				
Assam	649	167·0	21	1·1
Arunachal Pradesh	8	0·4	1	0·5
Meghalaya	68	10·5	3	2·1
Mizoram	2	0·1	—	—
Bihar	852	460·4	66	12·7
Manipur	11	2·7	—	—
Nagaland	16	38·3	4	1·1
Orissa	427	80·6	60	17·0
Tripura	12	2·9	1	—
West Bengal	12,304	1,654·9	498	43·5
Andman and Nicobar Islands	5	1·5	1	6·0
TOTAL	14,354	2,419·3	655	84·0
Northern Region				
Haryana	419	38·3	24	3·9
Himachal Pradesh	138	22·1	9	1·3
Jammu and Kashmir	157	34·7	7	3·6
Punjab	1,313	45·4	103	14·3
Rajasthan	837	134·3	83	14·0
Uttar Pradesh	2,435	327·2	144	15·7
Chandigarh	223	48·9	20	10·8
Delhi	6,056	45,524·2	550	47·4
TOTAL	11,578	5,175.1	940	111·0

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

1	2	3	4	5
Southern Region				
Andhra Pradesh	1,613	407·2	145	21·7
Karnataka	2,322	621·3	202	26·7
Kerala	1,512	320·8	74	8·1
Tamil Nadu	4,382	711·6	285	27·8
Pondicherry	92	4·5	10	0·6
TOTAL	9,921	2,065·4	716	84·9
Western Region				
Madhya Pradesh	719	108·6	60	16·2
Maharashtra	11,612	1,539·1	877	65·3
Goa, Daman and Diu	314	49·6	29	2·8
Gujarat	2,546	520·9	209	15·4
Dadra and Nagar Haveli	7	0·1	2	0·1
TOTAL	15,198	2,218·3	1,177	99·8
GRAND TOTAL	51,051	11,878·1	3,488	379·7

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

Companies which Ceased to Work

The number of companies which went into liquidation or were struck off under section 560 (5) of the Companies Act, 1956 or otherwise became defunct or ceased to work during 1978-79 was 383. Comparative figures for earlier years were : 1965-66—915, 1969-70—523, 1970-71—472, 1971-72—373, 1972-73—550, 1973-74—315, 1974-75—272, 1975-76—302, 1976-77—278 and 1977-78—344.

Government Companies

Table 12.12 gives the number and paid-up capital of government companies at work in 1962, 1965 and 1972 onwards and up to 31 March 1979.

TABLE 12.12
GOVERNMENT COMPANIES AT WORK

As on 31 March	Public		Private		Total	
	No.	Paid-up capital (Rs crores)	No.	Paid-up capital (Rs crores)	No.	Paid-up capital (Rs crores)
1962	41	23·5	113	606·2	154	629·7
1965	54	51·5	129	1,062·8	183	1,114·3
1972	107	156·0	245	2,213·1	352	2,998·1
1973	126	219·0	264	2,779·4	390	2,998·1
1974	147	249·1	303	4,396·0	450	4,645·1
1975	210	315·4	363	4,659·6	573	4,996·0
1976	243	468·5	408	5,653·7	651	6,122·2
1977	273	591·9	428	6,592·0	701	7,174·5
1978	300	725·5	445	7,802·1	745	8,527·6
1979[1]	321	825·7	461	7,462·5	782	8,315·2

[1]Provisional.

Foreign Companies

On 31 March 1979, there were 358 foreign companies in India as defined under section 591 of Companies Act, 1956 (*i.e.* joint stock companies incorporated abroad but having a place of business in India). The distribution of these companies, according to their country of origin, as on 31 March 1979 was U.K. 189; USA 64; Japan 17; France 7, Canada, Bangladesh and Pakistan 6 each; West Germany, Switzerland, Netherland and Italy 5 each; Hong Kong, Australia and Sweden 4 each; Belgium, Yugoslavia and Uganda 3 each; Singapore, Nepal, Bahama Islands, Thailand and Lebanon 2 each; and Panama, Kenya, Kuwait, Liberia, Luxembourg Tanzania, Iran, Aden, Malaysia, Bermuda, Greece and Austria 1 each.

INSURANCE

Life Insurance

The Life Insurance Corporation of India came into existence on 1 September, 1956. The Corporation had 5 zonal offices at Bombay, Delhi, Kanpur, Calcutta and Madras; 41 divisional offices, 701 branch offices, 8 sub-offices and 115 development centres in India on 31 March 1979.

Business by LIC

During 1978-79, LIC issued 21 lakh new policies assuring Rs 2,743 crores. Its group schemes business amounted to Rs 5,293 crores during the same period.

The Life Insurance business in force at the end of each of the six accounting periods from 1973 is given in table 12.13.

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

TABLE 12.13
LIFE INSURANCE
TOTAL BUSINESS

As on 31 March	In India		Out of India		Total	
	No. of policies (lakhs)	Sums assured & bonuses (Rs crors)	No. of policies (lakhs)	Sums assured & bonuses (Rs crores)	No. of policies (lakhs)	Sums assured & bonuses (Rs crores)
1973[1]	167·93	9,611	0·84	121	168·77	9,732
1974[1]	179·44	11,480	0·79	124	180·23	11,604
1975	187·47	13,185	0·75	124	188·32	13,309
1976	196·10	16,745	0·71	124	196·81	16,869
1977	202·80	17,815	0·68	127	203·48	17,942
1978	207·13	20,070	0·61	120	207·74	20,190

[1]Revised.

On 31 March 1979 the total income of the Corporation after deduction of income tax at source amounted to Rs 1,133.62 crores of which the premium income accounted for Rs 774.98 crores. The Life Fund stood at Rs 5,116.32 crores on 31 March 1979.

Investment policy

The investment pattern of the Corporation continues to be governed by the statutory provisions of section 27A of the Insurance Act, 1938. The government recently reviewed the pattern of investments with special reference to the Corporation's contribution to (i) socially desirable objectives, (ii) region-wise distribution and (iii) investment in private corporate sector.

The LIC has to invest, besides investing 25 per cent in central government and another 25 per cent in state governments and other approved securities, at least 25 per cent of the net additions to its controlled Fund in socially oriented sectors, that is, Public Corporate/ DYH Sectors. The total investments of the LIC in public sector, co-operative sector and private sector including joint sector amounted to Rs 3,915 crores, Rs 603 crores and Rs 776 crores respectively on 31 March 1980.

GENERAL INSURANCE

The process of nationalisation of general insurance business, which was initiated with the take-over on 13 May 1971 of the management of the undertakings of Indian and foreign insurers, was completed on 1 January 1973. On that day the shares of Indian insurance companies and the undertakings of other insurers, namely, mutual companies, co-operative societies, the General Insurance Department of the Life Insurance Corporation and foreign insurers, were acquired under the General Insurance Business (Nationalisation) Act, 1972. The law provides for payment of amounts totalling Rs 38.05 crores for the acquisition of these shares and undertakings.

In pursuance of the Insurance Business (Nationalisation) Act, the General Insurance Corporation of India was registered as a government company on 22 November 1972 for the purpose of superintending, controlling and carrying on general insurance business. The authorised capital of the Corporation is Rs 75 crores.

On 1 January 1973, the Indian insurance companies became subsidiaries of the Corporation and the undertakings of the remaining insurers were transferred to one or other of these companies. On 1 January 1974, all the nationalised general insurance companies were merged into four subsidiaries of the Corporation. The General Insurance Corporation and its subsidiaries have the exclusive privilege

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

of carrying on general insurance business in India. However, some state governments (Gujarat, Karnataka, Kerala and Maharashtra) continue to carry on their existing lines of insurance business in respect of the properties belonging to them and their undertakings, semi-government bodies and boards and also to undertakings in which the state governments have substantial financial interest.

Janta Insurance Policy

In keeping with the objectives of nationalisation, a new policy called the Janta Personal Accident Insurance Policy was introduced on 1 April 1976 for granting personal accident insurance cover for a nominal premium of Rs 12 only per annum. About 5.94 lakh policies were sold up to October 1979 (1978-79) yielding a premium of Rs 75.66 lakhs.

Crop Insurance

The Crop Insurance Schemes operated by GIC, are on an experimental basis. Presently crop insurance has been undertaking on a limited basis in Gujarat, Maharashtra, Andhra Pradesh and Tamil Nadu. The crops covered are different varieties of cotton, groundnut and wheat.

Agricultural Pump-set Insurance

A new scheme-called Agricultural Pump-set Insurance comprehensive cover against break-down, burglary, theft, fire and lightning at a very nominal premium has been introduced. During 1978-79 (up to October) about 72,239 pump-sets were insured resulting in a premium of Rs 27.03 lakhs.

Insurance Cattle

Cattle insurance business is transacted directly by all the four subsidiaries of GIC. An agreement among the companies provides for uniform premium rates policy terms and conditions and procedures. The agreement came into force on 1 April 1976. During 1978-79 (up to October) about 23 lakh cattle were insured resulting in a premium of Rs 6.75 crores.

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

13 PLANNING

Planning in India derives its objectives and social premises from the Directive Principles of State Policy set forth in the Constitution. The public and private sectors of the economy are viewed as complementary. The private sector covers not only organised industry but also small-scale industries, agriculture, trade and a great deal of activity in housing and construction and other fields. Individual effort and private initiative are considered both necessary and desirable, the policy being to assist development on the basis of voluntary co-operation to the utmost extent. Economic planning also envisages a growing public sector with massive investments in basic and heavy industries.

The Government of India appointed a Planning Commission in 1950 to prepare a blueprint of development, taking an overall view of the needs and resources of the country. The composition of the Commission as on 8 August 1980 was as follows :

Smt. Indira Gandhi	Prime Minister and Chairman
Narayan Datt Tiwari	Minister of Planning & Deputy Chairman
Dr. M. S. Swaminathan	Member
Mohammad Fazal	Member
Dr. Manmohan Singh	Member-Secretary

THE FIRST FIVE PLANS

Objectives

The First Five Year Plan (1951-52 to 1955-56) had a two-fold objective to correct the disequilibrium in the economy caused by the Second World War and the partition of the country and to initiate simultaneously a process of all-round balanced development which would ensure a rising national income and a steady improvement in the living standards over a period of time. Since the country had to import foodgrains on a large scale in 1951 and there were inflationary pressures in the economy, the Plan accorded the highest priority to agriculture, including irrigation and power projects. About 44.6 per cent of the total outlay of Rs 2,069 crores in the public sector (later raised to Rs 2,356 crores) was allotted for their development. The Plan also aimed at increasing the rate of investment from 5 per cent to about 7 per cent of the national income.

In 1954, Parliament declared that the broad objective of economic policy should be to achieve a 'socialistic pattern of society' under which the basic criteria for determining the lines of advance would be social gain and greater equality in incomes and wealth and not private profit. The Second Five Year Plan (1956-57 to 1960-61), therefore, sought to promote a pattern of development which would ultimately lead to the establishment of a socialistic pattern of society in India. In particular, it stressed that the benefits of economic development should accrue more to the relatively less privileged sections of society and there should be a progressive reduction in the concentration of incomes, wealth and economic power.

The main aims of the Plan were : (i) an increase of 25 per cent in the national income; (ii) rapid industrialisation with particular emphasis on the development of basic and heavy industries; (iii) large

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

expansion of employment opportunities; and (iv) reduction of inequalities in income and wealth and a more even distribution of economic power. The Plan also aimed at increasing the rate of investment from about 7 per cent of the national income to 11 per cent by 1960-61. The Plan laid special stress on industrialisation—increased production of iron and steel, heavy chemicals, including nitrogenous fertilizers and development of heavy engineering and machine building industry.

The Third Five Year Plan (1961-62 to 1965-66) aimed at securing a marked advance towards self-sustaining growth. Its immediate objectives were to : (i) secure an increase in the national income of over 5 per cent per annum, and at the same time ensure a pattern of investment which could sustain this rate of growth during subsequent plan periods; (ii) achieve self-sufficiency in foodgrains and increase agricultural production to meet the requirements of industry and exports; (iii) expand basic industries like steel, chemicals, fuel and power and to establish machine-building capacity, so that the requirements of further industrialisation could be met within a period of ten years or so mainly from the country's own resources; (iv) utilise fully the man-power resources of the country and ensure a substantial expansion in employment opportunities; and (v) establish progressively greater equality of opportunity and bring about reduction in disparities of income and wealth and a more even distribution of economic power. The national income was to increase by about 30 per cent from Rs 14,500 crores in 1960-61 to about Rs 19,000 crores by 1965-66 (at 1960-61 prices) and per capita income by about 17 per cent from Rs 330 to Rs 385 during the same period.

The situation created by the Indo-Pakistan conflict, two successive years of severe drought, devaluation of the currency, general rise in prices and erosion of resources available for plan purposes delayed finalisation of the Fourth Five Year Plan. Instead between 1966 and 1969, three Annual Plans were formulated within the framework of the Draft Outline of the Fourth Plan. They took into account the conditions prevailing at the time. The state of the economy and the non-availability of financial resources for plan purposes kept down the size of development outlay during this period.

The Fourth Plan (1969-74) aimed at accelerating the tempo of development in conditions of stability and at reducing fluctuations in agricultural production as well as the impact of uncertainties of foreign aid. It aimed at raising the standard of living of the people through programmes which at the same time were designed to promote equality and social justice. The Plan laid particular emphasis on improving the condition of the less privileged and weaker sections of the society, especially through the provision of employment and education. Efforts were also directed towards reduction of concentration and a wider diffusion of wealth, income and economic power.

The Plan aimed at increasing the net domestic product at 1968-69 factor cost from Rs 29,071 crores in 1969-70 to Rs 38,306 crores in 1973-74. In terms of 1960-61 prices, this implied an increase from Rs 17,351 crores in 1968-69 to Rs 22,862 crores in 1973-74. The average annual compound rate of growth envisaged was 5.7 per cent.

The Fifth Five Year Plan was formulated at a time when the economy was facing severe inflationary pressures. The major objectives of the Plan were to achieve self-reliance and to adopt measures for raising the consumption standards of the people living below the

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

poverty line. The Plan also gave high priority to bringing inflation under control and to achieving stability in the economic situation. The Fifth Five Year Plan targeted an annual growth rate of 5.5 per cent in national income. Four Annual Plans pertaining to the Fifth Five Year Plan period have been completed. It was subsequently decided to end the Fifth Five Year Plan with the close of the Annual Plan 1977-78 and to initiate work for a new plan for the next five years with new priorities and programmes. Although the finalisation of the medium-term Five Year Plan (1978-83) is still incomplete, the Annual Plan 1978-79 consistent with the strategy and priorities envisaged in the Five Year Plan (1978-83) was finalised and is under implementation.

Outlay and Investment

The public sector outlay as planned in the First, Second and Third Plans was Rs 2,356 crores, Rs 4,800 crores and Rs 7,500 crores while the actual expenditure was Rs 1,960 crores, Rs 4,672 crores and Rs 8,577 crores respectively. The investment by the private sector in the First, Second and Third Plans was Rs 1,800 crores, Rs 3,100 crores and Rs 4,190 crores respectively. The total public sector outlay during the three Annual Plans was Rs 6,756.50 crores. The Fourth Plan outlay envisaged originally was Rs 24,882 crores. It consisted of the public sector outlay of Rs 15,902 crores (including Rs 13,655 crores investment) and private sector investment of Rs 8,980 crores. The actual public sector expenditure during the Fourth Plan is estimated at Rs 15,779 crores. The final Fifth Plan envisaged an outlay of Rs 66,353 crores, of which the public sector outlay was Rs 39,304 crores and the expected private investment was Rs 27,049 crores. The anticipated public sector expenditure during the first three years of the Fifth Plan was Rs 19,505 crores. The public sector outlay for 1977-78, the terminal year of the Fifth Plan, was of the order of Rs 9,965 crores. With reordering of investment priorities, the Plan for 1978-79 envisages a public sector outlay of Rs 11,650 crores.

Table 13.1 shows the progress of Plan expenditure in the public sector from 1961-62 to 1977-78 and outlays for 1978-79 and 1979-80.

Achievements

During the First Plan, owing largely to increase in agricultural production, the national income went up by 18 per cent as against the target of 12 per cent. The incraese in the Second Plan was 20 per cent as against the target of 25 per cent. In the Third Plan, national income (revised series) at 1960-61 prices rose by 20 per cent in the first four years but declined by 5.7 per cent in the last year. During the three Annual Plans 1966-67 to 1968-69 there was modest increase in the national income. In the initial years of the Fourth Plan, the growth rate in national and per capita income was quite satisfactory. In the later part of the Plan there was slackening in the growth rate. As against the projected overall rate of growth of 5.7 per cent per annum during the Fourth Plan, the realised rate of growth is estimated at 4.7 per cent in 1969-79, 4.9 per cent in 1970-71, 1.4 per cent in 1971-72, (–) 0.9 per cent in 1972-73 and 3.41 per cent in 1973-74. The growth rate in national income achieved during the first three years of the Fifth Plan is estimated at 0.2 per cent, 6.0 per cent and 5.2 per cent respectively.

The index of agricultural production with triennium ending 1961-62 as base, rose from 84.4 at the end of the First Plan to 102.7 at the

INDIA 1980
CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

TABLE 13·1

PROGRESS OF PLAN EXPENDITURE : CENTRE, STATES AND UNION TERRITORIES

(Rs. crores)

Head of Development	Third Plan (Actuals)	Annual Plan 1966-69 (Actuals)	Fourth Plan 1969-74 (Actuals)	Fifth Plan Outlay (1974-79)	Fifth Five year plan				Draft plan 1978-83	
					1974-75 (Actuals)	1975-76 (Actuals)	1976-77 (Actuals)	1977-78 (Anti-cipated)	1978-1979 (Outlay)	1979-80 (Outlay)
1	2	3	4	5	6	7	8	9	10	11
Agriculture and allied sectors	1,088·9	1,107·11	2,320·41	4,643·6	542·8	680·7	928·26	1,263·61	1,745·16	1,815·22
Irrigation and flood control	664·7	471·0	1,354·1	3,434·0	429·6	551·6	766·54	987·15	1,160·60	1,260·05
Power	1,252·3	1,212·5	2,913·7	7,015·9	941·0	1,195·7	1,513·99	1,742·84	2,196·86	2,395·99
Village and small industries	240·8	126·1	242·6	10,200·6	54·5	74·0	102·32	157·72	219·05	289·48
Industry and minerals	1,726·3	1,510·4	2,864·4	—	1,191·1	1,724·6	2,069·63	2,176·89	2,413·90	2,547·10
Transport and communications	2,111·7	1,222·4	3,080·4	6,881·4	1,078·8	1,238·1	1,308·17	1,608·28	1,794·23	2,135·61
Education	588·7	306·8	774·3	1,284·3	139·3	188·5	338·27	425·11	413·81	273·77
Scientific research	71·6	47·1	130·8	445·33	49·23	69·93	—	—	138·35	110·67
Health	225·09	140·2	335·5	681·7	85·2	118.1	142·44	198·58	281·53	268.18
Family welfare	24·9	70·4	278·0	497·4	62·1	80·6	148·26	86·12	111·72	116·19
Water supply and sanitation	105·7	102·7	458·9	930·2	137·2	157·7	202·81	259·07	339·37	429·05
Housing, urban and regional development	127·6	73·3	270·3	1,106·9	134·6	164·1	224·61	252·58	305·78	301·80
Welfare of backward classes	99·1	73·6	164·6	687·0	71·12	100·52	75·88	69·43	96·12	89·65
Social welfare and nutrition	19·4	11·2	64·4	86·2	14·2	12·1	30·61	39·08	64·80	55·15
Labour welfare and craftsmen training	55·8	34·8	31·1	50·1	4·2	5·2	8·84	12·66	17·34	21·69
Other programmes Special schemes	173·1	115·8	179·8	1,358·64	103·74	134·74	239·112	285·182	351·552	439·562

1	2	3	4	5	6	7	8	9	10	11
(i) Special welfare programme			123·6							
(ii) Crash scheme for educated unemployed . .			54·0							
(iii) Advance action for Fifth Plan			120·0							
Total	8,576·5	6,625·4	15,778·8[5]	39,303·2	5,038·6	6,496·1	8,081·74	9,564·40	11,650·17	12,549·63

[1]Includes buffer stock : Rs 140 crores for 1968-69, Rs 25 crores for 1969-70, Rs 50 cores for 1971-72, Rs. 25 crores for 1972-73 and Rs 24 crores for 1973-74. Thus the figure for buffer stocks during the Fourth Plan works out to Rs. 124 crores against the original plan provision of Rs 255 crores.

[2]Includes provision for hill and tribal areas.

[3]Relates to science and technology.

[4]Included provision for nutrition.

[5]Excludes expenditure on nutrition (3·7 crores).

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

end of the Second Plan. In the Third Plan the performance of agriculture was not satisfactory. Widespread droughts in 1965-67 slowed down the rate of growth and led to increased imports of food and other items. The index of agricultural production receded to 95.8 in 1965-66. Subsequent years recorded substantial improvement in the position and the index number reached 133.3 in 1973-74. However, the year 1974-75 was again a bad one for agriculture when the index declined by 4.7 points to 128.6. In 1975-76 the position improved greatly and the index number of agricultural production touched 148.6

Net irrigated area increased from 2.08 crore hectares in 1950-51 to 2.27 crore hectares at the end of the First Plan, 2.46 crore hectares at the end of the Second Plan, 2.66 crore hectares at the end of the Third Plan and 2.90 crore hectares in 1968-69. By the end of the Fourth Plan the net irrigated area was 4.22 crores hectares and by 1977-78 the figure is estimated at 4.95 crore hectares.

Power development during the last three decades has been significant. Successive plans with large outlays on power development have added substantial generating capacity and a basic transmission and distribution system has been developed. The total installed generating capacity and a basic transmission and distribution system has been developed. The total installed generating capacity which was only 2,300 MW in 1950 increased to over 24,040 MW in 1976-77. An addition of about 2,000 MW is anticipated during 1977-78 which will take the total to about 26,000 MW.

Large investments in the industrial and mineral sectors, particularly from the beginning of the Second Plan, have brought about a significant transformation in the industrial scene. There was a rapid and almost continuous growth in industrial production during the first three plan periods. Industrial production which increased at an average rate of 7 per cent in the first decade of planning (1950-51 to 1960-61) recorded an increase of around 9 per cent per annum during the next four years, i.e., 1961-62 to 1964-65. The performance since then, however, has been very uneven and substantially below the earlier achievements and projected expectations. The growth declined to 5.3 per cent in 1965-66, was almost stagnant in the subsequent two years, witnessed a spurt to 7.4 per cent in 1969-70 and hovered around 3 to 4 per cent over the next five years. A significant improvement took place in 1976-77 when the index of industrial production showed a growth rate of around 9.5 per cent. However, on the whole, the average annual growth rate was no more than 4 per cent during the decade 1965-75, and about 6 per cent during the period 1974-75 to 1977-78.

The educational system has recorded, over the years, a phenomenal growth. At the beginning of the Fifth Five Year Plan, the total number of schools and colleges had increased to 4.72 lakhs from 2.31 lakhs in 1950-51, the corresponding increase in enrolment was from 2.73 crores to 8.76 crores. School enrolment up to the middle stage (class I-VIII) in 1973-74 was 7.94 crores. The additional enrolment in elementary education during the four years of the Fifth Plan was 1.06 crores; 72 lakhs in classes I-IV and 34 lakhs in classes VI-VIII, and the levels of enrolment reached were 85 per cent in the age group 6-11, 40 per cent in age group 11-14 and 60 per cent in age group 6-14.

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

14 AGRICULTURE

AGRICULTURE

The agricultural sector contributes nearly one-half of the national income, provides livelihood to about three-fourths of the population, supplies the bulk of wage goods required by the non-agricultural sector and raw materials for a large section of industry. It also provides a substantial portion of the country's exports. Transport, marketing, processing and other aspects of agricultural production and utilization have also a strong bearing on the national economy.

Land Utilization

Land utilization statistics are available for 30.41 crore hectares or 92.5 per cent of the total geographical area of 32.88 crore hectares.

Table 14.1 gives details of land utilization in India for 1974-75, 1975-76 and 1976-77.

(crore hectares)

	1974-75[1]	1975-76[1]	1976-77[1]
Total geographical area	32·88	32·88	32·88
Total reporting area for land utilization	30·42	30·43	30·41
1. Forest	6·59	6·66	6·68
2. Not available for cultivation			
(i) Area put to non-agricultural uses	1·71	1·74	1·75
(ii) Barren and uncultivable lands	2·36	2·21	2·20
TOTAL	4·07	3·95	3·95
3. Other uncultivated excluding fallow lands			
(i) Permanent pastures and grazing lands	1·29	1·26	1·25
(ii) Land under tree crops and groves	0·41	0·40	0·40
(iii) Cultivable waste	1·67	1·74	1·71
TOTAL	3·37	3·40	3·36
4. Fallow lands			
(i) Current fallows	1·62	1·25	1·43
(ii) Others	0·93	0·95	0·97
TOTAL	2·55	2·20	2·40
5. Net area sown	13·84	14·22	14·02
Area sown more than once	2·58	2·88	2·68
TOTAL CROPPED AREA	16·42	17·10	16·70

[1]Provisional.

Irrigated Area

Of the net area under cultivation, 24.8 per cent is irrigated. Between 1950-51 and 1976-77, the net irrigated area increased by 1.39 crore hectares as shown in table 14.2.

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

TABLE 14·2
AREA UNDER IRRIGATION

(*crores hectares*)

Source of irrigation	1950-51	1975-76[1]	1976-77[1]	Increase[1] (+) or decrease (—) in 1976-77 over 1950-51
Canals	0·83	1·38	1·38	+ 0·55
Tanks	0·36	0·40	0·39	+ 0·03
Wells	0·60	1·43	1·48	+ 0·88
Other sources	0·30	0·24	0·23	— 0·07
TOTAL	2·09	3·45	3·48	+ 1·39

[1]Provisional.

Agricultural Census

The first agricultural census was conducted on a complete enumeration basis with 1970-71 as the reference year. It provided very useful data on the structure of agricultural holdings and their main characteristics. Another agricultural census has been undertaken with 1976-77 (July 1976 to June 1977) as the reference year. The scope of this census was enlarged by including 'input survey' under which data on extent of use of various fertilizers, manures, pesticides and availability of livestock, agricultural machinery and implements, were collected through sample enquiries.

Tabulation of data relating to main census and the input survey has been completed in all the states and union territories except Assam, Gujarat and Jammu and Kashmir. No census could be conducted in Punjab due to agitation by *Patwaries*. Draft state agricultural census reports have also been received from 8 states and 4 union territories. The all India report giving statewise results is expected to be available late in 1980.

PRINCIPAL CROPS AND AREA

The two outstanding features of agricultural production are the wide variety of crops and the preponderance of food over non-food crops.

Table 14.3 shows the area under major crops during 1950-51, 1960-61, 1970-71, 1977-78 and 1978-79.

TABLE 14·3
AREA UNDER PRINCIPAL CROPS

('000 hectares)

Crops	1950-51	1960-61	1970-71	1977-78[1]	1978-79[2]
(1)	(2)	(3)	(4)	(5)	(6)
Rice	30,810	34,128	37,592	40,283	40,195
Jowar	15,571	18,412	17,374	16,318	16,125
Bajra	9,023	11,469	12,913	11,104	11,342
Maize	3,159	4,407	5,852	5,683	5,779
Ragi	2,203	2,515	2,472	2,600	2,619
Small millets	4,605	4,955	4,783	4,574	4,457
Wheat	9,746	12,927	18,241	21,456	22,220
Barley	3,113	3,205	2,555	2,001	1,836
TOTAL CEREALS	78,230	92,018	1,01,782	1,04,018	1,04,573
Gram	7,570	9,276	7,839	7,974	7,871
Tur	2,181	2,433	2,655	2,626	2,663
Other pulses	9,340	11,854	12,040	12,897	13,015
TOTAL FOODGRAINS	97,321	1,15,581	1,24,316	1,27,515	1,28,122

CC-0. Agamigam Digital Presevation Foundation, Chandigarh

(1)	(2)	(3)	(4)	(5)	(6)
Potatoes	240	375	482	665	790
Sugarcane	1,707	2,415	2,615	151	3,119
Black pepper	80	103	120	112	112
Chillies	592	667	783	791	806
Ginger	17	19	22	36	34
Tobacco	357	401	447	504	411
Groundnut	4,494	6,443	7,326	7,029	7,548
Castor seeds	555	466	439	380	446
Sesamum	2,204	2,169	2,433	2,384	2,441
Rapeseed and Mustard	2,071	2,883	3,323	2,389	3,557
Linseed	1,403	1,789	1,897	3,584	2,025
Cotton	5,882	7,610	7,605	2,010	8,087
Jute	571	629	749	7,866	888
Mesta	N.A.	274	330	797	377
Tea	314	331	354	365	N.A.
Coffee	91	114	135	366	N.A.
Rubber	58	129	203	233	236
Coconut	622	717	1,046	N.A.	N.A.

[1]Revised estimates. [2]Final estimates. N.A.—Not available

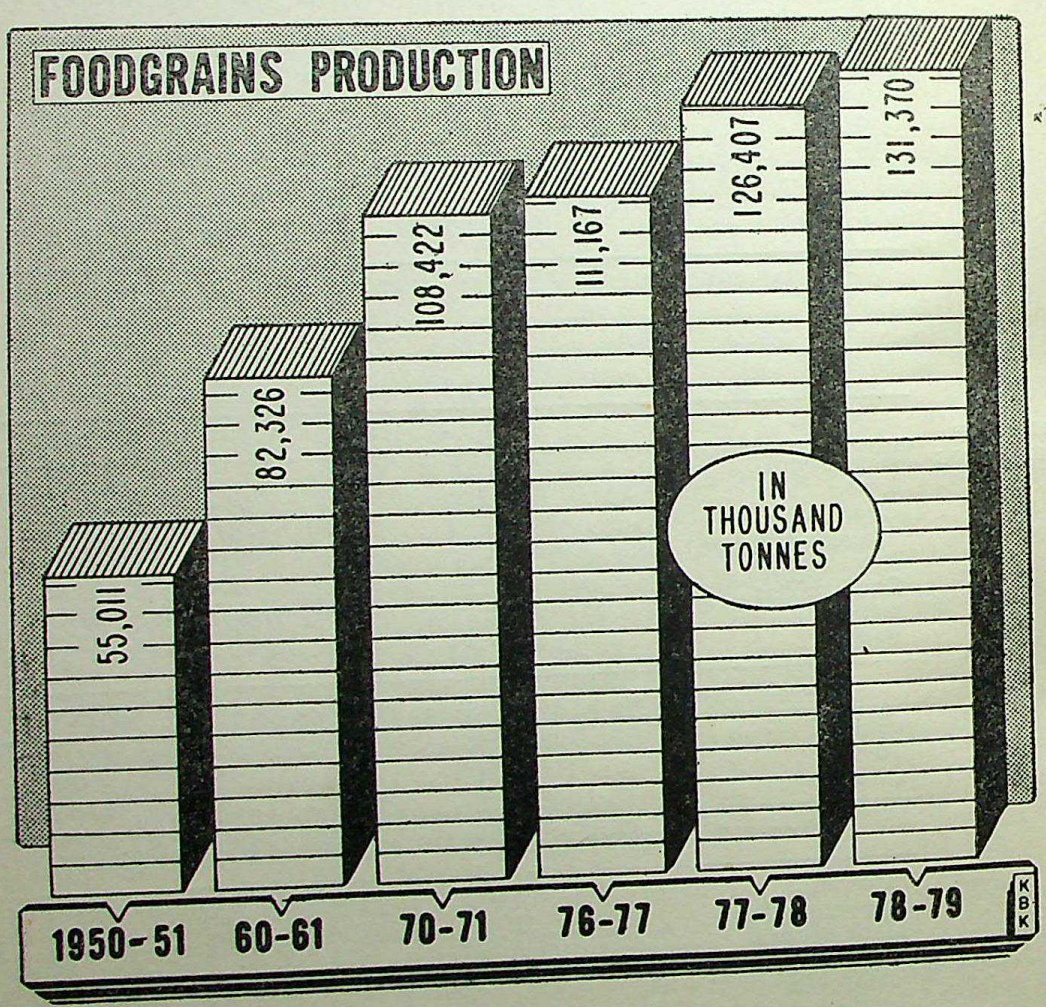
TABLE 14.4
PRODUCTION OF PRINCIPAL CROPS

('000 *tonnes*)

Crops	1950-51[1]	1960-61[1]	1970-71[1]	1977-78[2]	1978-79[3]
Rice (cleaned)	22,058	34,600	42,225	52,670	53,829
Jowar	6,250	9,899	8,105	12,064	11,563
Bajra	2,680	3,286	8,029	4,730	5,513
Maize	2,357	4,115	7,486	5,973	6,419
Ragi	1,353	1,876	2,155	2,866	3,039
Small millets	1,776	2,010	1,988	2,070	1,032
Wheat	6,822	10,995	23,832	31,749	34,982
Barley	2,518	2,811	2,784	2,311	2,121
TOTAL CEREALS	45,814	69,592	96,604	1,14,434	1,19,200
Gram	3,823	6,256	5,199	5,410	5,835
Tur	1,813	2,097	1,883	1,930	1,914
Other pulses	3,561	4,381	4,736	4,633	4,421
TOTAL FOODGRAINS	55,011	82,326	1,08,422	1,26,407	1,31,370
Potatoes	1,832	2,871	4,807	8,135	10,125
Sugarcane(Cane)	70,490	14,080	26,368	1,76,966	1,56,450
Black Pepper	20	28	26	26	26
Chillies (Dry)	358	426	520	543	638
Ginger (Dry)	14	18	30	72	67
Tobacco	257	300	362	494	451
Groundnut (Nuts in shell)	3,319	4,698	6,111	6,083	6,387
Castorseed	107	109	136	217	236
Sesamum	422	320	562	520	540
Rapeseed and mustard	768	1,347	1,976	1,650	1,877
Linseed	364	395	474	527	514
Cotton (Lint)[6] ('000 bales)	3,039	5,550	4,763	7,243	7,927
Jute (Dry fibre) [4]('000 bales)	3,497	4,136	4,938	5,361	6,454
Mesta (Dry fibre) ('000 bales)	659	1,113	1,255	1,793	1,840
Tea	275	321	419	559	571
Coffee	25	43	110	125	110
Rubber	14	25	92	147	135
Coconut (crore nuts)	358[5]	464	—	N.A.	N.A.

[1]Adjusted [2]Revised estimates. [3]Final estimates [4]180 kg each
[5]Unadjusted figures· 6170 kg each
N.A.—Not available.

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh



CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

PLAN EXPENDITURE

The Draft Sixth Plan (1978-83), which started from 1978-79, records high priority to agriculture and rural development with the main objectives of augmenting agricultural production as well as generating substantial employment and income opportunities to benefit the rural poor. The revised Draft envisages the public sector outlay of Rs 18,142.3 crores which represents an increase of about 125 per cent over the approved outlay of Rs 8,077.6 crore for the Fifth Five Year Plan (1974-79). The broad sub-sector-wise distribution of outlays for agriculture and rural development for the five year plan (1978-83) and the annual plans 1978-79 and 1979-80 is given in table 14.5.

TABLE 14·5 OUTLAYS ON AGRICULTURAL AND RURAL PROGRAMME

(*Rs crores*)

Head of development	Revised Plan (1974-79)	Draft Sixth Plan (1978-83)	Annual Plan (1978-79)	Annual Plan (1979-80)
I. *Agriculture and allied sectors*				
1. Agriculture	1,484·7	4,555·32	701·4	763·1
2. Minor irrigation	792·3	1,415·0	235·0	230·4
3. Soil conservation	221·1	390·4	59·1	62·7
4. Area development	206·6	617·6	88·4	91·0
5. Food	122·5	260·7	45·0	50·2
6. Animal husbandry and dairying	437·7	670·6	126·5	140·5
7. Fisheries	150·0	259·6	82·3	80·8
8. Forests	205·7	391·6	80·7	71·3
9. Investment in agricultural financial institutions	519·8	718·6	159·9	168·3
10. Community development	127·5	518·0	52·2	58·6
11. Cooperation	375·7	740·9	114·7	98·3
TOTAL	4,643·6	10,538·3	1,745·20	1,815·2
II. *Irrigation and flood control*	3,434·0	7,604·0	1,160·60	1,260·1
TOTAL (I+II)	8,077·61	18,142·3	2,905·81	3,075·31

[1]Does not include the provision for hilly and tribal area development which have been included under 'social services' (Welfare of Backward Classes).

[2]Includes Rs 1,932·71 crores under agriculture, Rs 329·92 crores under land reform Rs 821·15 crores under/rural development and Rs 1471·50 crores under other special development programme.

Source : Draft Sixth Five Year Plan (1978-83)—Revised.

SEASONS

There are three main crop seasons, namely, *kharif, rabi* and summer. The major *kharif* crops are rice, *jowar, bajra,* maize, cotton, sugarcane, sesamum and groundnut. The major *rabi* crops are wheat, *jowar,* barley, gram, linseed, rapeseed and mustard. Rice, maize and groundnut are grown in summer season also.

PRODUCTION

The production of foodgrains in India in 1978-79 was a record 13.14 crore tonnes, which was 49.6 lakh tonnes more than in the previous year. Production in the current decade has been fluctuating. It went below 10.00 crore tonnes in 1972-73 and 1974-75 and rose again to 12.1 crore tonnes in 1975-76.

Table 14.4 shows the production of principal crops in 1950-51, 1960-61, 1970-71, 1977-78 and 1978-79.

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

FOOD SITUATION

The food situation in the country continued to be generally comfortable during 1978-79 (July-June) due mainly to bumper foodgrain production for the second year in succession, availability of sizeable stocks with the government and the continued free inter-state movement of foodgrains. Market availability of cereals remained generally easy and their prices remained at reasonable level till March 1979, after which they exhibited an upward trend. The prices of pulses remained at reasonable level following record production in 1978-79.

Foodgrain production in 1978-79 touched a new high of 13.14 crore tonnes surpassing the previous record level of 12.64 crore tonnes attained in 1977-78 and 11.16 crore tonnes reached in 1976-77.

Cereal prices generally recorded a fall between July 1978 and March 1979 but thereafter there was a steady increase. The all-India index number of whosale prices of cereals (Base 1970-71 = 100) which stood at 158.1 in June 1978 dropped to 156.8 in March 1979, and rose to 181.4 on 24 November 1979, showing thereby a rise of 15.7 per cent; it was also higher by 15 per cent compared to that of the previous year. The increase in price was attributable to seasonal factors, general inflationary pressures in the economy, increase in procurement prices and also failure of monsoon rains and consequent poor production prospects of *kharif* crops.

The All-India index number of wholesale prices of pulses which stood at 238.8 in June 1978 rose to 270.8 in October 1978, showing thereby a rise of 13.4 per cent. The increase in prices was mainly seasonal in nature. Following the arrival of new *kharif* pulses into the market, the wholesale prices of pulses tended to show a fall and this tendency continued till February 1979. The index for pulses dropped by 13.4 per cent from 270.8 in October 1978 to 234.5 in February 1979. During March-September 1979, prices of pulses again showed a rise except for the slight fall recorded in May 1979. The index rose from 234.6 in February 1979 to 252.6 in September 1979, a rise of 7.7 per cent. Again, there was a fall in the prices and the index, 244.3, on 24 November 1979, was lower by 3.3 per cent than that in September 1979 and by 7.2 per cent compared to that a year ago.

Foodgrains Policy

For 1979-80 *rabi* marketing season, the procurement price of wheat of all varieties was raised to Rs 115 per quintal. The issue price of wheat released from the central pool for public distribution was however, maintained at Rs 130 per quintal.

The new classification of paddy and rice recommended by the Balasubramanian Committee has been adopted from the *kharif* year 1979-80. Under this, paddy and rice have been classified into three categories, *viz.*, common, fine and superfine, instead of the earlier four categories of coarse, medium, fine and superfine. For the *kharif* marketing season 1979-80, the procurement price for paddy had been fixed at Rs 95 per quintal for 'common' varieties, Rs 99 per quintal for 'fine' and Rs 103 per quintal for 'superfine' varieties. Adopted to the new classification, the issue prices of rice for 1979-80 marketing year were Rs 150 per quintal for 'common', Rs 162 per quintal for 'fine' and Rs 172 per quintal for 'superfine' varieties. The prices of boiled rice of all varieties are Rs 2 per quintal higher as before.

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

The procurement price for coarse-grains, *i.e., jowar, bajra, maize* and *ragi* for 1979-80 marketing year has also been fixed at Rs 95 per quintal and the issue price of coarse grains from the central pool has been raised to Rs 96 per quintal. Movement of wheat, rice paddy and coarse grains will continue to be unrestricted throughout the country.

Procurement

During 1977-78 and 1978-79, government reiterated its commitment to purchase all foodgrains of fair average quality offered by the producers at the procurement price and the public sector agencies undertook extensive support purchases of foodgrains.

A quantity of 1.03 crore tonnes of foodgrains—48.53 lakh tonnes of rice, 54.78 lakh tonnes of wheat and 19,000 tonnes of coarse grains—was procured out of the 1977-78 crop, of which about 89.71 lakh tonnes of foodgrains (40.79 lakh tonnes rice and 48.92 lakh tonnes wheat) was contributed to the central pool.

The procurement of foodgrains out of the 1978-79 crop is estimated to be of the order of 1.43 crore tonnes—62.57 lakh tonnes of rice, 79.89 lakh tonnes of wheat and 1.25 lakh tonnes of coarse grains. Out of this, 1.16 crore tonnes of foodgrains (55.78 lakh tonnes rice and 60.27 lakh tonnes wheat) was contributed to the central pool.

Public Distribution

The public distribution system functioning through a wide network of ration/fair price shops aims primarily at supplying foodgrains to the consumers, particularly the weaker sections, at a reasonable price. A quantity of 1.01 crore tonnes of foodgrains was distributed through the ration/fair price shops during 1978 as compared to 1.17 crore tonnes distributed during 1977. Easy availability of foodgrains at reasonable prices in the open market led to fall in the quantity distributed through the public distribution system. Drought conditions developed in a large part of the country from August 1979 and the offtake of foodgrains from the public distribution system started picking up progressively during each subsequent month. A total of about 1.01 crore tonnes of foodgrains including 14.37 lakh tonnes released from the central pool under the 'Food For Work' programme was distributed through the public distribution system up to November 1979, as compared to 94.25 lakh tonnes distributed during the corresponding period last year.

Rationing

Statutory rationing of rice and wheat continued to be in force in Calcutta and Asansol-Durgapur group of industrial towns in West Bengal. Informal rationing of foodgrains continues in other areas. The total number of fair price shops and ration shops in the country, up to the end of November 1979 was 2.4 lakhs, covering a population of 59.19 crores.

Price Policy

Fixation of minimum support prices and procurement prices has been an essential feature of the central government's policy for the past several years. Minimum prices are in the nature of a long-term guarantee to the producers so that in the event of a glut, price are not allowed to fall below the minimum economic levels. These prices are generally announced before the start of the sowing season. In 1973-74, the minimum support prices for *kharif cereals* were substantially

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

raised and fixed at levels higher than the previous year's procurement prices. The government decided not to announce the minimum support prices for *kharif* cereals from 1974-75 to 1979-80 and for wheat from 1975-76 to 1979-80, and undertook to purchase all quantities of foodgrains of fair average quality offered for sale at the procurement prices which are higher than the minimum support prices.

Import of Foodgrains

There was no import of foodgrains during 1979. Table 14.6 shows the import of cereals into India since 1974.

TABLE 14.6
IMPORT OF CEREALS

('000 *tonnes*)

Cereals	1974	1975	1976	1977	1978	1979
Rice . .	—	130	149	8	—	—
Wheat . .	4,203	7,016	5,832	547	—	—
Other cereals .	671	261	534	—	—	—
TOTAL .	4,874	7,407	6,515	555	—	—

Export of Foodgrains

During 1979, wheat/wheat flour and rice were supplied to USSR, Vietnam and Mauritius against balance export commitments made in the years 1977 and 1978. In addition, fresh government-level agreements were entered into for supply of 50,000 tonnes of wheat and 1.5 lakh tonnes of rice to Bangladesh on commodity loan basis; 24,000 tonnes of rice to Mauritius on commercial basis; and 2 lakh tonnes of rice to USSR as part payment towards the cost of 6 lakh tonnes of crude oil to be imported from that country. Supplies towards fulfilment of these fresh commitments were also made during the year 1979. Details of the supplies committed during the past three years and the present export position are given in table 14.7.

TABLE 14.7
EXPORT OF CEREALS

Country	Commodity	Supplies committed upto 31 December 79 (*tonnes*)	Quantity exported	Basis of supply
1. *Supplies committed earlier to* 1979				
(i) USSR . .	Wheat	14.98 lakh	13.77 lakh	Repayment of wheat loans
(ii) Vietnam .	Wheat flour (*maida*)	70,000	69,344	Commodity loan
(iii) Afghanistan	Wheat	50,000	50,000	—Do.—
(iv) Mauritius .	Rice	24,000	23,892	Commercial
(v) Indonesia .	Rice	50,000 (+5%)	52,342	—Do.—
2. *Fresh supplies Committed during* 1979				
(vi) Mauritius .	Rice	24,000	Commercial	Commodity loan
(vii) Bangladesh	Wheat	50,000	49,997	—Do.—
	Rice	1.50 lakh	1.27 lakh	In exchange of crude oil
(viii) USSR .	Rice	2 lakh	1.36 lakh	

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

Buffer Stock

Building up and maintaining of buffer stock of foodgrains have been important elements of India's food policy. The buffer stock is meant primarily to ensure stability in supplies and prices over the years.

On the basis of the recommendations made by the Technical Group on Buffer Stock of Foodgrains, the Government decided to build up and maintain a buffer stock of 1.2 crore tonnes. This is in addition to operational stock of foodgrains needed for running the public distribution system. The quantum of operational stock as estimated by the Technical Group varies for different points of time; the range being 35 to 38 lakh tonnes on 1 April to 82 lakh tonnes on 1 July.

The total physical stock with the central and state governments at the end of June 1979 was estimated to be 2.15 crore tonnes as against 1.88 crore tonnes a year earlier.

Storage

Storage and warehousing capacity in the public sector built by the Food Corporation of India, Central Warehousing Corporation and State Warehousing Corporations is essentially located in towns and cities. The storage at the rural level is undertaken through cooperatives. Apart from this, state governments also build storage capacity.

Save Grain Campaign

Since the storage losses at the farmer/trader level are known to be substantial due to faulty and improper methods of storage, the government is tackling the problem through the 'Save Grain Campaign'. The scheme aims at providing the appropriate technology through education, motivation and persuasion in preventing the losses and improving the farm and community level storage. Simple but effective methods of foodgrain storage and pest control are being popularised. Improved type of metal bins and pesticides are also supplied.

The activities of the Save Grain Campaign are being undertaken by a network of regional teams of technical staff. They are supported by the Indian Grain Storage Institute, Hapur, and its field stations at Hyderabad and Ludhiana, which conduct applied research on various aspects of grain storage, handling and preservation designing of storage structures, screening of pesticides and training for apex level personnel.

Quality Control

The Storage and Inspection Division is responsible for formulation of uniform specifications for procurement of foodgrain all over the country and also to deal with policy matters in respect of technical aspects for import and export of foodgrains and also to render advice to FCI, state governments and other agencies connected with the storage of foodgrain in respect of preservation and quality aspect. For this purpose the Central Grain Analysis Laboratory undertakes analysis of the consignment samples of imported as well as indigenously procured foodgrains and their products. Recently two quality control cells have been created; one at New Delhi and the other at Calcutta to monitor the quality of foodgrains being procured and preserved by FCI, CWC, SWC, state governments, and other connected agencies. The cells also investigate the quality complaints for early redressal.

Nutrition and Food Processing

The Food and Nutrition Board in the Department of Food has taken up a number of action programmes for systematic development, preservation and effective utilisation of food. The programmes have been directed towards improving the nutrition of the people by a combination of measures concerned with augmenting the available supplies of

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

nutritious foods, particularly for meeting the requirements of feeding programmes, fortification and enrichment of food supplies, training and educating nutrition workers and consumers and planning development of integrated food and nutrition systems approach. It has also initiated programmes for modernisation of rice, *dal* and maize milling, processing of other foodgrains, promotion of fruit and vegetable preservation industry, protein food industry and bakery industry. About 42,170 tonnes as *Balahar,* a low cost nutritious food, was produced during 1978-79 for use in nutrition intervention programmes, particularly for the pre-school and school going children. The production of miltone, a protein isolate toned milk based on groundnut, was more than 25 lakh litres during the year. About 651 tonnes of *Balamul,* a weaning food, was produced during 1978-79.

Four institutes of Hotel Management, Catering Technology and Applied Nutrition and eleven Food Craft Institutes continued to function during 1978-79. Masters' level courses as well as short term course on specialised subjects for Indian and foreign students were organised by the International Food Technology Training Centre, Mysore.

Food Corporation of India

The Food Corporation of India (FCI) was set up in 1965 under an Act of Parliament. It serves the nation in the vital areas of procurement, distribution, storage and movement of foodgrains. It also performs other diversified activities such as rice milling and production of nutritious processed foods.

The FCI has set up 25 modern rice mills in various states to increase the availability of rice and extract oil from rice bran. It also produces *Balahar,* a protein-rich food for children. A solvent extraction plant at Ujjain produces groundnut oil and edible groundnut floor for use in *Balahar.* It has also set up a solvent extraction plant at Sambanarkoil (Tamil Nadu) for the manufacture of edible and industrial grade oil from rice bran. Its maize mill at Faridabad (Haryana) manufactures a variety of maize products. A *dal* mill has also been set up at Lucknow to meet the requirements of the Army Purchase Organisation.

The corporation had a total storage capacity (owned and hired) of about 2.31 crore tonnes as on 30 September 1979. Its turn over (purchase plus sales) in 1978-79 was about Rs 3,416.00 crores.

Central Warehousing Corporation

The Central Warehousing Corporation acquires and builds godowns and warehouses for storage of agricultural produce, inputs, implements and notified commodities.

The storage capacity with the corporation on 1 October 1979 was 32.76 lakh tonnes (godowns—18.76 lakh tonnes owned, 11.19 lakh tonnes hired and plinth—2-81 lakh tonnes. Besides this, the Corporation has also bonded or export warehouses at Bombay, Calcutta, Cochin, Madras, Hyderabad, Chandigarh and New Delhi to enable exporters/importers to keep their commodities in good condition pending transhipment.

DEVELOPMENT PROGRAMME

A new strategy for agricultural development is being implemented from 1966-67. It *inter-alia* includes cultivation of high-yielding varieties over larger areas; development of irrigation facilities, particularly exploitation of ground water resources; adequate and balanced use of fertilizers; adoption of need based plant protection measures; and a well

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

organised and systematic supply of inputs including credit through institutional and other financing agencies. In addition, efforts have been made to bring science and technology closer to the farmers through education and training and a strengthened extension set up. Special emphasis is being laid on programmes for the uplift of the weaker sections of rural population, particularly the small and marginal farmers, agricultural labourers, farmers in drought prone areas, tribal and hill areas etc.

IADP

The Intensive Agricultural District Programme (IADP), popularly known as the 'package programme', was started on a pilot basis in 1961 in seven selected districts and subsequently extended to some other districts. The programme aims at combining technical know-now, credit and production supplies for stepping up agricultural production, and has yielded significant results. At present, it is in operation in the state sector in 37 districts in fourteen states.

High Yielding Varieties Programme

The high-yielding variety programme is the main plan of the new agricultural strategy. A far-reaching event in the annals of Indian agriculture has been the introduction of high-yielding varieties of a number of field crops and hybrids of millets in particular. This programme covers major food crops, namely, wheat, rice, maize *jowar* and *bajra*. The success of this programme has revolutionised agriculture and brought about a phenomenal and rapid increase in foodgrains production in the country. Since 1965-66 (base year of the new agricultural strategy), the wheat production has increased three-fold and rice production by more than 76 per cent. The progress under maize, *jowar* and *bajra* was, however, small, mainly due to lack of suitable hybrids and incidence of pests and diseases on some of the hybrids.

The coverage of area under this programme has registered a sharp increase, from 18.9 lakh hectares in 1966-67 to 4.20 crore hectares in 1978-79. The target for 1979-80 was 4.30 crore hectares.

Among the five crops included under the programme, high-yielding varieties of wheat have proved to be a big success because of the absence of serious pests and diseases, decentralised water management system in a large part of wheat growing areas, better crop growth conditions, assured market and the price policy adopted by the government, etc. In fact, the increase in wheat output has become an important stabilising factor in foodgrain production in the country. The cultivation of wheat is now fast spreading even in non-traditional areas such as east Bihar, West Bengal, Maharashtra, Assam and Orissa.

Significant progress has also been made in the cultivation of high-yielding varieties of rice, although the pace of development is not as fast as in the case of wheat. This is due to the fact that the bulk of the crop is grown in *kharif* season which is subjected to vagaries of the monsoon, characterised by drought or floods and its vulnerability to attack by pests and diseases. However, in *rabi* season, when rainfall is low and water management is easier, the high-yielding varieties have given a much better performance. An important development in rice cultivation is the replacement of coarse high-yielding varieties of rice by high quality fine grain varieties like *Ratna, Vijaya, I.R.* 20, *Mahsuri*

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

and a number of *IET* selections. As a result of the introduction of high-yielding varieties, rice production is also increasing at a faster rate in the non-traditional rice-growing states like, Punjab, Haryana and western U.P. Much of the rice produced in these states is offered for procurement to the central pool because of limited local consumption. This has helped in diversification of cropping pattern in traditional rice growing belts which have not shown any substantial increase in productivity due to inherent reasons.

Among the coarse grains, hybrid bajra was making good progress till 1970-71, but subsequently it received a setback due to the prevalence of downy mildew and ergot diseases. Some new varieties/hybrids of *bajra* like *BJ*-104 and *BK*-560 tolerant/resistant to these diseases have since been evolved and are being spread over large areas. Similarly, some new hybrids and high-yielding varieties of *jowar* like CSH-5 and *CSH*-6 have been evolved to suit the prevailing cropping pattern in major *jowar* producing areas and are being taken up for large scale cultivation. There has also not been significant break-through in maize cultivation and its production is sought to be increased by concentrating efforts in potential areas with an organised marketing support.

The high-yielding varieties programme is dovetailed with the implementation of central sector schemes of (i) minikit programme of rice, wheat, maize, *jowar, bajra* and *ragi* for selection of suitable varieties adopted to different situations; (ii) community nurseries programme of rice and bajra to bring about an advancement in sowing time, increase in productivity and to vacate the fields early for timely sowing of succeeding *rabi* crops and to tide over crop losses due to natural calamities; (iii) replacement of rust susceptible wheat varieties in hill areas with rust resistant varieties to minimise the rust menace in the country; (iv) maize demonstrations in tribal areas to bring home to the tribal farmers the efficacy of the new technology in the production of maize crop for enhancing the yield per unit area; and (v) state level pre-season training of extension workers to disseminate the latest production technology, etc.

As a result of the various developmental measures undertaken both by the centre and the states, the total production of foodgrains in the country during 1978-79 was 13.14 crore tonnes which is about 50.00 lakh tonnes more than the previous record production of 12.64 crore tonnes in 1977-78. The target of foodgrains production for 1979-80 was 13.3 crore tonnes. Due to unprecedented drought conditions, there is likely to be a short fall in *kharif* production this year. However, concerted efforts were made to increase the *rabi* production by evolving timely production strategy, taking stock of the specific situation in different regions and making the best use of late rains received in some parts of the country.

Soil and Water Conservation

The soil and water conservation programmes constitute an important activity to protect the soil resources of the country, check soil erosion and land degradation and reclaim degraded and problem lands. The programmes are being implemented under the state, central and centrally sponsored sectors.

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

By the end of 1978-79, an area of 2.21 crore hectares was treated with soil and moisture conservation measures with a total expenditure of Rs 584.18 crores. The programme consists of contour bunding, bench terracing, *nalla* plugging, farm ponds, land levelling, grass land development etc.

The watershed management programme in the catchment of 31 river valley projects was also initiated in the Third Plan period with a view to prolong the life of the major reservoirs by reducing the sedimentation. Since 1974-75, the work is being carried out in 276 small priority watersheds of size 2,000 to 4,000 hectares.

All India Soil and Land Use Survey Organisation, Department of Agriculture, continues to carry out survey of the catchments for delineating and codifying watersheds and indicating their *inter se* priorities. The organisation also started collaborated projects with Indian Space Research Organisation for finding methodology to use remote sensing data including satellite imageries.

Reclamation of ravine land was taken up for protecting the valuable table lands. The programme also covers alkaline and acid soils and control of shifting cultivation since 1975-76. Under this programme, an area of 15.2 lakh hectares had been treated at a cost of Rs 99.47 crores during the period from 1951-52 to 1978-79.

Fertilizers

Fertilizer is the key input in increasing agricultural productivity. Other things remaining equal, every tonne of nutrient increases the yield by about 10 tonnes of food-grains. The annual consumption of fertiliser is thus, a good indicator of the country's performance in crop production. India ranks very high in the world in terms of fertiliser consumption. The consumption during 1979-80 was expected to be nearly 2.00 lakh tones more than in 1978-79 inspite of the acute drought situation in some major states.

To ensure that the right type of fertilizer reaches the farmer in the right quantity, at the right time and the right price, a number of innovative measures have been taken in this direction.

Organic Recycling

In the context of dwindling non-renewable energy resources, the programme on organic recycling is being given added attention. The programme like rural composing, bio-gas development, sewage/sullage utilization, green manuring and mechanised composting are now being implemented under the state sector. During 1978-79, the level of rural and urban compost production was raised to 2,224 and 61.00 lakh tonnes as against 2,157 and 58.00 lakh tonnes respectively during the previous year. The coverage under green manuring is of the order of 65 lakh hectares. New mechanised composting projects at Jaipur, Bangalore, Calcutta, Bombay, Delhi and Kanpur have been completed. A new cheaper model of bio-gas plant known as 'Janata Model' has been evolved.

Quality Seeds

For the supply of quality seeds, the Government of India set up two public sector undertakings, the National Seeds Corporation (NSC), in 1963 and the State Farms Corporation of India (SFCI), in 1969. However, with the launching of the 'national seeds programme' with the World Bank assistance in 1976, the Governments of Andhra Pradesh, Maharashtra, Punjab, Haryana, Bihar, Orissa, Karnataka, Rajasthan and Uttar Pradesh have also set up their own state seed corporations to

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

meet the long-term requirements for quality seeds in the country. Besides, the NSC and the SFCI, a large number of agricultural universities and research institutions are also participating in this programme. In order to develop the net work of seed production in the country, planned efforts are being made covering all facets of seed industry including quality control, seed certification, processing, storage, marketing and production of foundation and breeder seeds.

During 1978-79, the participating state seed corporations produced about 11.34 lakh quintals of certified seeds of wheat, paddy, maize, jowar, bajra, cotton and potato.

Under the National Seeds Programme, NSC is entrusted with the responsibility of inter-state marketing of certified seeds produced by the state seed corporations. To the extent SSCs are not in a position to meet the entire current demand and also buffer stock requirements for certified seeds, NSC has organised its own production programme through government farms and contract seed growers. During 1979-80, the total production of certified seeds of all crops was about 7.41 lakh quintals, as compared to 3.45 lakh quintals in the previous year.

The NSC produced 92,632 quintals of foundation seeds during 1979-80 as against 40,908 quintals during 1978-79. Besides, NSC is also organising certified seed production of jute with the cooperation of state seed corporations and registered growers. The corporation arranged the seeds to cover an area of 2.40 lakh hectares in 1979 against 2.04 lakh hectares in 1978.

To ensure timely supply of seeds to the farmers, NSC has increased its net-work of seed dealers from 3,527 to 3,583 and its sale points from 84 to 85 all over the country.

During 1979-80, the state farms corporation of India produced 30,350 quintals of foundation seeds and 2,16,145 quintals of certified seed.

To guarantee the quality of seeds produced by the state seed corporations and other organised sectors such as the National Seeds Corporation, State Farms Corporation of India, etc., independent state seed certification agencies with the grant-in-aid from the Government of India have been set up in the States of Bihar, Orissa, Punjab, Haryana, Uttar Pradesh, Rajasthan, Karnataka, Andhra Pradesh, Himachal Pradesh, Maharashtra, Tamil Nadu and Gujarat.

To advise the central and state governments, five committees and one board, *i.e.* central seeds committee, central sub-committees on release of varieties, crop standards and notification, sub-committee of the central seed committee in each state at state level and central seed certification board to enforce the Seeds Act, 1966 and the project management and monitoring committee to monitor the functions of the National Seeds Programme, are functioning.

Twenty-nine varieties of wheat, maize, *jowar, bajra,* peas and pulses have been recommended for release for general cultivation in the country. Besides, 330 varieties of different crops have been notified for the purpose of marketing quality seeds as required under the Seeds Act, 1966.

During 1979-80, 55,000 quintals of wheat seed was exported to other countries.

Since 1965, NSC has been regularly imparting comprehensive training covering the various aspects of scientific seed improvement to personnel from both within and outside the country.

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

Plant Protection

The consumption of pesticides, during 1978-79, was about 65,000 tonnes. During 1979-80, the centrally sponsored scheme called the 'control and eradication of pests and diseases of agricultural importance including weed control in endemic areas' was implemented. The coverage during 1979 was about 11.00 lakh hectares under this programme. The country remained free from locust activity during the year.

Agro-Industries Corporations

Agro Industries Corporations have been set up in 17 states as state sector undertakings, in which both the central and state governments are equal contributors. The Government of India has three Central directors on the board of each corporation. The central representation on the boards of the corporations has been professionalised. State governments have been advised to professionalise their representation on the board.

The total authorised share capital of all the corporations as on 31 March 1979 stood at Rs 80.00 crores and the paid-up capital was about Rs 65.6 crores, out of which Government of India's contribution was Rs 31.55 crores. Since 1979-80, the scheme has been transferred to the state sector and the government of India has not released any share capital during the year.

Agro-Service Centres

The Agro Service Centre Scheme was introduced in 1971 with the twin objective of providing employment to trained entrepreneurs and to provide inputs to the farmers at their door step at reasonable prices. Under the scheme, 118 centres were set up from January 1979 to 30 November 1979 with central assistance, raising the total number of centres to 3,128 (as on 30 November 1979) as against 3,010 as on 31 December 1978. The centres hired expensive agricultural machinery, e.g., tractors, combines, etc., for the farming community. To make these centres commercially viable, arrangements are being made to make them composite centres to sell other agro-inputs, steel, etc.

Drought Prone Programme (DPAP)

The DPAP was started during the Fourth Plan period as a central sector scheme with a view to obviate emergent scarcity relief and providing employment on a sustained basis. From the Fifth Plan onwards, this programme has been reoriented as an integrated area development programme. The programme seeks to improve the economy of drought prone areas through a package of schemes aiming at optimum development of the local resources in the agriculture and allied sectors and thereby reducing the severity and recurrence of drought.

Dry Land Agricultural Development

Nearly 75 per cent of the land in India is dependent upon rainfall which is erratic and unpredictable. This semi-arid/rainfed areas of the country, provide much of the industrial raw materials like cotton and oilseeds. Keeping in view the importance of this area, the Government of India had launched a scheme of Integrated Dry Land Agricultural Development in 1970-71 through 24 projects in 12 states. This scheme has been transferred to the state sector from 1979-80. The union government, however, maintains a close liaison with the state governments for the implementation of this programme and monitors its progress.

Rainfed Problem Area Development

In order to deal with the problem of developing the rainfed area, the Government of India has constituted a Task Force to identify

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

problems of semi-and/rainfed areas and to suggest ways and means of dealing with them. The Task Force submitted an interim report and will be completing its final report soon. The recommendations would form the basis for the development of the rainfed areas on a large scale.

Farmers' Service Societies

Farmers' Service Societies are being organised in different areas to provide integrated credit and other services to small and marginal farmers and agricultural labourers. The societies are expected to disburse credit, supply inputs including fertilizers, arrange for processing and marketing, wherever feasible, and undertake all connected activities. The membership is open to all agriculturists but to serve the interests of the weaker sections, two-third of the membership of the Board of Management, is reserved for them.

AGRICULTURAL MARKETING

The Directorate of Marketing and Inspection advises the central and state governments on agricultural marketing problems. Its other activities include : (i) promotion of grading and standardisation of agricultural and allied commodities; (ii) statutory regulation of markets and market practices; (iii) training of personnel; (iv) market extension; (v) market research, planning and survey; and (vi) administration of Cold Storage Order, 1964 and Meat Food Products Order, 1973.

Grading and Standardisation

The Directorate of Marketing and Inspection enforces compulsory quality control before export on as many as 40 agricultural commodities. The total value of commodities graded for export during 1978-79 was about Rs 373.4 crores.

The important commodities graded under 'Agmark' for internal consumption include cotton, vegetable oils, ghee, cream, butter, eggs, rice, wheat, atta, jaggery, potatoes, pulses, Kangra tea, honey and ground spices. The total value of commodities graded for internal consumption during 1978-79 was about Rs 58.7 crores.

To ensure the purity and quality of products graded under *'Agmark'*, 16 laboratories have been set up at Alleppy, Bangalore, Bombay, Calcutta, Cochin, Guntur, Jamnagar, Kanpur, Kozhikode, Madras, Mangalore, Patna, Rajkot, Ghaziabad, Tuticorin and Virudunagar. The central Agmark laboratory and the regional laboratories in Bombay, Calcutta, and Madras are being strengthened by the addition of biological testing units. Five more laboratories at Bhopal, Bhubaneswar, Gauhati, Amritsar and Jaipur have been set up.

For securing prices commensurate with quality for the farmers, 63 agricultural commodities were graded before sale in 506 grading units which were functioning in the producing areas of different states/union territories at the end of March 1979. The total estimated value of the commodities graded at producers' level at those centres was Rs 421.00 crores.

The Directorate has formulated grade specifications for 113 agricultural commodities and grading instructions for 78 commodities.

Regulation of Markets

Regulation of markets is done by the state governments. The Directorate of Marketing and Inspection renders advice in framing market legislation and its enforcement. The number of regulated markets in the country at the end of March 1979 was 4,345.

The Directorate is extending financial assistance to selected regulated markets for providing grading facilities for important commodities like tobacco, jute, cotton, groundnut and cashewnuts at the producers' level. It is also implementing a scheme for providing central assistance

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

for the development of infrastructural facilities in selected regulated markets both at primary and wholesale levels and the markets situated in command areas, markets predominantly for commercial crops and terminal markets dealing in mostly fruits and vegetables. Since the inception of the scheme in 1972-73, a total amount of Rs 6.73 crore has been provided as grants-in-aid to 230 regulated markets. The provision for the current year is Rs 2.76 crore. Besides, under a new scheme which was started in 1977-78 to assist rural markets, grants-in-aid to the extent of Rs 5.50 crores had been provided to various states for the development of 412 rural markets during 1977-78 and 1978-79. The provision for 1979-80 was Rs 3 crores.

Training of Personnel

Persons from different states are provided training in various fields of agricultural marketing by the Directorate of Marketing and Inspection. So far, 5,961 persons have been trained.

Market Extension

With the object of developing orderly marketing, extension work among the producers, traders and consumers is carried out by the Directorate through various mass media like documentaries, cinema slides, exhibitions, seminars and printed literature. A national seminar on Rural Market Development was organised by the Directorate in December 1979 under the auspices of SAO/DSE to provide guidelines for implementing a programme of rural market development.

Market Research and Survey

Under the scheme of market research and survey, two programmes are being implemented by the Directorate : (i) market research and planning and (ii) market planning and design centre. Under market research and planning scheme, the Directorate carries out country-wide marketing surveys on livestock and important agricultural and horticultural commodities to identify and study the problem areas of marketing of various agricultural commodities. A report on 'marketable surplus and post-harvest losses of paddy' has been released recently. Similar reports on wheat and coarse cereals are being prepared.

Survey of a number of wholesale markets for fresh fruits and vegetables has been carried out as a part of the activities of the market planning and design centre to make suggestions for their development and improvement.

Cotton Classing Scheme

Under the Cotton Classing Scheme at Surat, during 1978-79, 425 cotton classing certificates covering 37.442 lakh bales valued at Rs 8.79 crores were issued. With the success of the pioneer scheme, the government has sanctioned 5 more such centres—one each in Maharashtra, Karnataka, Tamil Nadu, Madhya Pradesh and Punjab.

Cold Storage Order—1964 and Meat Food Products Order—1973

In order to develop the cold storage industry in a planned manner and to ensure hygienic and proper refrigeration conditions, to render technical guidance for scientific preservation of food-stuffs and to help prevention and exploitation of farmers and depositors, the Cold Storage Order of 1964 is enforced by the Directorate. So far, 2,266 cold storages with a capacity of 33.47 lakh tonnes have been established in the country. The Directorate also implements the Meat Food Products Order, 1973 throughout the country to ensure quality control of

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

meat food products for human consumption. So far, 97 licences have been granted.

AGRICULTURAL RESEARCH AND EDUCATION

The Department of Agricultural Research and Education, set up in 1973, is responsible for coordinating research, education and extension education in the field of agriculture, animal husbandry and fisheries in India. Besides, it also helps in bringing about inter-institutions and intra-institutional collaboration, both at national and international levels, among agencies like the International Atomic Energy Agency, and FAO, engaged in the allied fields.

ICAR

Farm research in the country is carried out and coordinated by a number of public and quasi-public institutions, spearheaded by the Indian Council of Agricultural Research (ICAR). Set up in 1929, it is the apex body for formulating plans and co-ordinating agricultural, animal husbandry and fisheries education and research and their application. (For details, see Chapter on 'Scientific Research.')

Agricultural Education

In the field of agricultural education, ICAR performs a role similar to that of the University Grants Commission. Almost every state has an agricultural university, now numbering 22, while Maharashtra, Uttar Pradesh and Bihar have more than one. With a view to imparting practical and skill-oriented training to farmers, unemployed village youth, school drop-outs, etc., *Krishi Vigyan Kendras* (Farm Science-Centres) are being established by ICAR in different parts of the country. Thirty five *Kendras* were in operation by 1979-80. Seven Trainers' Training Centres have also been set up to train the teachers of these *Kendras*.

The total enrolment of students for agricultural and animal sciences has gone up by about 16 times and that of agricultural universities 19 times since 1960. The major national agricultural research institute, the Indian Agricultural Research Institute, New Delhi, has been granted the status of a deemed university since 1958, in the facilities for in-service and full-lime research available, both at post-graduate and doctoral levels.

National Commission on Agriculture

The National Commission on Agriculture, set up in August 1970, submitted its final report on 31 January, 1976. The report contains recommendations on a number of subjects like crop production, land and water development, animal husbandry, fisheries, forestry, agricultural research, education and training, organisation of supporting services, employment and manpower and other aspects like land reforms, special area programmes etc. An implementation cell in the Department of Agriculture and Cooperation follows up the recommendations of the Commission.

LAND REFORMS

Objective and Programme of Action

Immediately, after independence, land reform measures were initiated in the country. The objectives of the land reforms policy were set out by the planners as the removal of such institutional and motivational impediments to the modernisation of agriculture as were innate in the agrarian structure inherited from the past and the reduction of gross inequalities in the agrarian economy and rural society which stemmed from unequal rights in land.

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

These objectives were translated into the following programmes of action : (a) the abolition of the prevalent intermediary system between the state and the tiller of the soil; (b) tenancy reform including security of tenure, reduction of rent and conferment of ownership rights on the cultivating tenants in the land held under their possession; (c) imposition of a ceiling on agricultural land holdings; (d) rationalisation of the record of rights in land so as to make it reflect the rights of tenants, share-croppers and other categories of insecure landholders and; (e) consolidation of holdings with a view to making easier the application of modern techniques of agriculture. Provision of dependable irrigation facilities, etc., was put down as one of the main items in the programme of action.

Abolition of Intermediary Tenures

By and large, all intermediary tenures have been abolished and over two crore farmers brought into direct relationship with the State. Some of these tenures were of great antiquity and their abolition represents a remarkable transition to a modern agrarian structure.

Ceiling on Land Holdings

Almost all the states have legislations restricting the size of holdings. The permissible size varies according to the quality of the land. Acquisition of land in excess of the ceiling is prohibited. Land rendered surplus to the ceiling is taken over by the state and distributed among the weaker sections of the community. The ceiling legislations were revised on the basis of guidelines formulated in 1972. Prior to the revision, about 11.86 lakh hectares of land were declared surplus of which 6.96 lakh hectares were distributed among poorer peasants.

The allottees of these lands are being provided with financial assistance for taking to productive agriculture.

Security of Tenures

Various steps have been taken to improve the lot of cultivating tenants. They have been granted protection against rackrenting and eviction and have also been conferred ownership rights over the lands cultivated by them as tenants. Steps have also been taken to prevent the eviction of home-stead tenants and in many states they have been conferred ownership rights over these home-steads.

Consolidation of Holdings

Legislative measures for consolidation of holdings have been undertaken in most of the states, especially in the command areas of major irrigation projects. Nearly 4.5 crore hectares have been consolidated and the process is complete in Punjab, Haryana and western Uttar Pradesh.

ANIMAL HUSBANDRY

Cattle Development

Cattle occupy an important position in the economy of the country. In view of their valuable contribution to the rural economy, a high priority has been given for their development in the national plan.

India is the home of some of the best breed of cattle and milch buffaloes in the world, including the well known tropical milch breed *Gir*. The approach adopted in cattle development is to upgrade the productivity of indigenous breeds by selective breedings. However, in the case of non-descript cattle population, which constitute the major portion, crossbreeding with recognised temperate dairy breeds such as Jersey and Holstein Friesian, etc., has been adopted to combine the productivity of the exotic breeds with the adaptability of the indige-

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

nous variety.

Important projects for cattle development are operation flood and intensive cattle development projects. The other activities include establishment of nucleus breeding herds, maintenance of herd books for nationally important breeds of cattle, programmes for artificial insemination, introduction of frozen semen technique, etc. An integrated approach has been developed to give simultaneous attention to improved breeding, augmentation of feed and fodder resources, effective health cover, extension service and marketing facilities.

A network of about 12,000 artificial insemination units has been set up in the rural areas.

FODDER DEVELOPMENT

Seven regional stations for forage production and demonstration have been established in different agro-climatic conditions in the country by the Central Government with the object of achieving quick transfer of technology on all aspects of fodder production, conservation and utilization and to assist the state agencies in the conduct of their extension programmes. Introduction of new agro-technology now enables the farmers in the valley of Kashmir to grow *berseem* in the paddy fallows and get valuable fodder in spring without in any way disturbing the normal paddy cultivation. New fodder species have been identified for use in the upland rain-fed areas and also for winter feeding in the temperate region of the country.

Significant breakthrough has been achieved in the production of pasture legume seeds for use in grassland development. New species/varieties such as *Stylo-santhes hamata, S. Scabra, S. Viscosa,* etc., have been introduced and large scale seed multiplication undertaken for distribution to the Forest Department, DPAP areas and other interested agencies.

The fodder minikit testing programme has been intensified to cover 12 states and over 10,000 kits were supplied during the *kharif* and *rabi* seasons.

The production of foundation seeds of the recommended high yielding varieties were further stepped up by the regional stations and during the current year over 113 tonnes of seeds of improved varieties of fodder were produced.

One fodder seed production farm (432 acres) was started in 1979 at Hessaraghatta (Karnataka) with Australian collaboration. With the starting of seed production in this farm, availability of foundation and certified seeds of a number of fodder crops will ease considerably.

POULTRY DEVELOPMENT

Egg production in the country recorded an increase from 280 crores in 1961 to about 1,200 crores by the end of 1979. The progress in broiler production rose from 40 lakh broilers in 1971, to over 2 crores by the end of 1979.

Scientific Poultry Breeding Programme taken up by the Central Poultry Breeding Farms located at Hessarghatta (Bangalore), Bombay and Bhubaneswar has yielded significant results. A hybrid strain called 'NH 260' adapted to our agro-climatic conditions has already been released. Another strain with very good production potential has also been developed at the Central Poultry Breeding Farm, Bombay.

Scientific broiler breeding programme has been taken up at the Central Poultry Breeding Farm, Chandigarh.

Three random sample test units located at Hessarghatta (Banga-

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

lore), Bombay and Bhubaneswar are providing useful service to poultry farmers, hatcheries and poultry breeding farms by evaluating the performance of the hybrid chicks and broiler stocks under uniform management and feeding conditions. The fourth test unit is being set up at Gurgaon in Haryana. This will help in testing the stock in agro-climatic conditions of the northern region.

A comprehensive duck development programme has been drawn up for major duck producing states like Kerala, Tamil Nadu, Andhra Pradesh, West Bengal, Assam, Tripura and Manipur. With British assistance under Colombo Plan, Indian extension workers are being trained in modern duck rearing practices in UK. A special duck disease diagnostic laboratory and vaccine production unit for producing vaccine for important duck diseases is being set up at Calcutta.

The Central Training Institute for Poultry Production and Management, Hessarghatta has conducted two training courses in feed analytical techniques and one in economic poultry production. The training institute is also serving the cause of poultry industry by providing feed analytical facilities.

The marketing of eggs and poultry at national level has been taken up by National Agricultural Cooperative Marketing Federation of India Ltd., (NAFED) and marketed about 5 crore eggs in the period from April to December 1979.

PIGGERY DEVELOPMENT

There are eight bacon factories and pork processing plants in the country in the public sector. Some of these factories have diversified their production pattern and are handling different types of meat. Sixty-seven pig breeding farms supply breeding stocks of exotic pigs to the farmers for further multiplication and the surplus stock for slaughtering in bacon factories. With a view to augmenting the pork production in the country, exotic pig varieties like large white Yorkshire, Landrace Hampshire and Boskshire are being imported.

CATTLE DEVELOPMENT

The total sheep population of India is about 4 crores. India stands fourth in the world as regards sheep population. However, wool production of our sheep is very low compared to other developed countries. The average wool yield of our sheep is 0.8 to 0.9 kg per annum, whereas in other countries sheep like Merino produces about 4 to 5 kg of wool a year. The total wool production of our country is 3.94 crore kg per year. Out of this, 57 per cent is of carpet variety, 43 per cent of apparel quality and 15 per cent is of combing quality. The total spindlage for utilising apparel wool established in the country is 25 lakh and the wool required to run these spindles is 3.5 crore kg (single-shift). Since only 1.7 crore kg of the raw wool of the apparel quality is produced in our country, about 1.8 crore kg of the wool is imported at a cost of Rs 25 crores every year.

The value of export of woollen carpets rose from Rs 13.69 crores in 1971-72 to Rs 70 crores in 1977-78. The total availability of wool for carpet manufacture is about 1.1 crore kg and total demand is of the order of 2.00 crore kg.

To improve the genetic make up of our sheep, the total requirement of fine wool rams in the country to cover the total breedable ewes is 1.07 lakhs. To achieve this, 88 sheep breeding farms and 865 extension centres have been opened. These measures have shown some results and the total raw wool production which was only 2.75 crore kg in 1951 has gone up to 4 crore kg by 1979.

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

To further boost the sheep industry, an exotic sheep breeding farm has been established at Hissar. The farm has distributed 2,000 selected exotic rams to different states. This farm also trains officers and shepherds in modern sheep management. To popularise the modern methods of machine shearing of sheep, shearers from different states are also trained. To improve the marketing and grading system of wool in the country, 16 grading and marketing organisations including state wool boards have been established.

Modernisation of Slaughter Houses

There are nearly 2,800 slaughter houses in the country where about 3.78 crore sheep and goats, 14 lakh large animals and 15 lakh pigs are slaughtered annually. At present, about 73.8 lakh tonnes of meat is being produced annually, of which 54 per cent is from sheep and goats, 26 per cent from large animals, 13 per cent from poultry and 7 per cent from pigs.

Programmes for modernising slaughter houses in selected cities such as Panaji (Goa), Bangalore, Calcutta, Durgapur, Hyderābad and Madras have been initiated and development corporations have been formed.

ANIMAL HEALTH

Provision of adequate veterinary aid is an essential pre-requisite for obtaining optimum production from the livestock. Approximately, 11,200 veterinary hospitals and dispensaries and about 450 mobile veterinary dispensaries function in the country to provide veterinary aid. Veterinary polyclinics with facilities for treating clinical, surgical, gynaecological and intestinal disorders have also been set up in some important towns. Disease investigation laboratories have also been provided in different states and union territories for aiding diagnosis of animal disease. Veterinary training, including post-graduate and Doctorate training, is imparted at 22 veterinary colleges in the country. Additionally, research on animal disease problems is conducted in two national research institutes, namely, the Indian Veterinary Research Institute and the Central Sheep and Wool Research Institute.

African horse sickness, a dreadful disease of horses, has been eradicated from the country. Swine fever has also been largely controlled and its incidence confined to a few areas in the north eastern states. The incidence of rinderpest is now considerably reduced and it remains confined to only certain pockets in the country. Approximately, 30.00 lakh vaccinations have been carried out so far under the Foot and Mouth Disease Control programme. Twenty-three lakh doses of Foot and Mouth Disease/Polyvalent vaccine were produced at two manufacturing centres in the country during 1977-78. With a view to preventing ingress of exotic diseases in the country through importation of livestock/livestock production, four quarantine stations have been set up at Delhi, Bombay, Calcutta and Madras.

ANIMAL HUSBANDRY STATISTICS

Efforts were made during the Fifth Plan to build up a reporting system for collection of data on important indicators of livestock economy. Sample surveys were started to estimate production of major livestock products such as milk, eggs, wool, and meat, which will enable preparation of both state and all-India annual estimates of production in a regular and continuous manner. A system for monitoring and assessment of development programmes, efficient arrangements for livestock census and release of time-bound result are to be

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

given adequate attention during the next five years.

DAIRY AND MILK SUPPLY

There are, at present, 190 dairy plants in the country in the public and cooperative sectors. Of these, 94 are liquid milk plants, 30 milk product factories and 66 pilot milk schemes/rural dairies. Against their installed capacity of 96.78 lakh litres a day, the average throughput of milk is 62 lakh litres.

Under Operation Flood I Project, milk production enhancement programmes are being taken up in 10 states. Necessary infrastructure has also been created by setting up 18 feeder/balancing dairies and expansion of existing dairies and also setting up of 4 Mother Dairies at Delhi, Bombay, Calcutta and Madras.

A massive dairy development project estimated to cost Rs 485 crores has been launched under Operation Flood II. This project will enable one crore milk producer families to build a viable self-sustaining dairy industry by middle of 1985. The project envisages the creation of a National Milk Grid which will link the rural milk sheds to the major demand centres.

FISHERIES

Fish Production

The development of fisheries recorded growth during 1979-80. This was possible due to the high priority given to the development of this sector, in view of extended jurisdiction over two hundred miles of sea from the coastline for marine fisheries exploitation.

Fish production during 1978-79 was about 24.08 lakh tonnes comprising of 15.35 lakh tonnes from marine sector and 8.73 lakh tonnes from inland sector. The target for fish production for 1979-80 was 26.26 lakh tonnes (16.47 lakh tonnes from marine resources and 9.79 lakh tonnes from inland sources).

Export of Marine Products

Foreign exchange earnings from the fish and fishery products have registered a significant increase in recent years. During 1978-79, exports amounted to 86,894 tonnes valued at Rs 234.6 crores representing an increase of Rs 53.6 crores over the previous year.

Mechanisation

During 1979-80, 1,267 additional small fishing boats were expected to be introduced. The present commercial deep sea fishing fleet strength is 120 consisting of 65 vessels on charter and 55 vessels fully owned by Indian companies.

Fishing Harbours

To exploit marine fish resources, landing and berthing facilities for fishing crafts are being provided at various major and minor ports. Fishing harbours capable of handling small and medium size fishing vessels have been developed at the minor ports of Tuticorin, Vizhingom, Karwar, Dhamra and Port Blair. For the operation of medium and large size deep sea fishing vessels, fishing harbours have been developed at the major ports of Cochin, Roychowk and Vishakhapatnam (I stage).

Construction of fishing harbours at the major port of Madras and minor ports of Malpe and Honnavar is nearing completion. Construction is in progress at the major ports of Vishakhapatnam (2 stage) and Sassoon Dock and minor ports of Mallipatnam, Kodikkarai, Veraval, Mangrol, Porbunder, Ratnagiri, Kakinada, Nizamapatnam, Bavanapadu, Kasargode, Mangalore and Karanja of which the projects at Veraval and Mangrol in Gujrat, Kakinada, Nizamapatnam and

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

Vishakhapatnam (2 stage) are being implemented as integrated marine fisheries projects with World Bank assistance.

Exploration of Marine Fisheries

The Exploratory Fisheries Project, Bombay carried out exploratory survey in the offshore and deep sea waters from 12 bases with the help of 25 trawlers. The project has completed survey of 90 per cent area within 40 fathoms depth and the results are being made available to the fishing industry.

Integrated Fisheries Project

The important activities of the Integrated Fisheries Project, Cochin, include (i) experimental fishing; (ii) production and marketing of diversified fish products; and (iii) training of personnel for fisheries industry. The workshop and slipway of the project gives servicing facilities for the project vessels, sister organisations and private entrepreneurs of Cochin and surrounding areas. The project has set up a modern aluminium canning plant for the utilization of pelagic fishery resources.

Inland Fisheries

The inland fisheries resources in the country comprise 29,000 kms, of rivers and their tributaries, 30 lakh hectares of reservoirs, 15 lakh hectares of tanks and ponds and 14 lakh hectares of brackish water swamps.

The total fish production from all the sources increased from 6.90 lakh tonnes in 1971 to 8.95 lakh tonnes in 1978. The National Commission on Agriculture has estimated a production potential of about 35.00 lakh tonnes of fish per annum from all inland resources in the next 25 years. Significant technological progress in fish culture in fresh water and brackish water had been achieved in the recent past. A tentative outlay of Rs 75.56 crore has been made during the plan period 1978-83 in the state sector for development of fish farming.

Fish Farmers' Development Agencies

In the central sector, a pilot scheme called the Fish Farmers' Development Agencies (FFDA) was taken up during the Fifth Plan to popularise intensive fish farming in tanks and ponds. Till the end of 1979, 50 FFDAs had been established mobilising 5,057 hectares of water area. The FFDAs have carried out extension and allied operations such as training of fish farmers, supply of inputs and reclamation of tanks and ponds.

A World Bank project on inland fisheries is being undertaken from April, 1980 for a period of 5 years, to develop 1,17,000 hectares of water area in 5 project states, *viz.*, West Bengal, Bihar, Orissa, Madhya Pradesh and Uttar Pradesh.

Training

Training facilities are available at the Central Institute of Fisheries Education, Bombay, and its unit at Inland Fisheries Training Centre, Barrackpore and Regional Training Centre at Agra. A Central Fisheries Extension Training Centre at Hyderabad also trains candidates in extension techniques relating to fish culture. These institutions have been transferred to the Indian Council of Agricultural Research from August 1979.

The Central Institute of Fisheries—Nautical and Engineering Training, Cochin, with its unit at Madras is training candidates for marine fisheris operatives for manning the fishing vessels and the shore establishments.

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

FORESTRY

In India, forests occupy an area of about 746.00 lakh hectares and account for 22.7 per cent of the total geographical area. The National Forest Policy aims at maintaining one-third of the total geographical area under forests. There is very heavy pressure on forest land for diversion to cultivation, river valley projects, industrial estates and many other uses, as a result of which about 42 lakh hectares of forest area were lost during the period 1951-52 to 1972-73. This alarming situation has been engaging government's attention for long. The Central Board of Forestry has recommended that forest area should not be diverted to non-forestry uses and in case of any inescapable diversion, it should be done with the concurrence of the states and the loss of forest should be adequately compensated by providing as far as possible, equivalent alternative land for afforestation. Table 14.8 shows the classification of area under forests during 1975-76 and 1977-78.

TABLE 14.8
AREA UNDER FORESTS

(*lakh hectares*)

Description	1976-77[1]	1977-78[1]
1. *From the point of view of exploitation* :		
(i) Exploitable (Forests in use)	460	430
(ii) Potentially exploitable	162	163
(iii) Others	126	153
TOTAL	748	746
2. *By ownership* :		
(i) State owned	716	717
(ii) Corporate bodies	20	20
(iii) Private individual	12	9
TOTAL	748	746
3. *By legal Status* :		
(i) Reserved	390	394
(ii) Protected	232	233
(iii) Unclassed	126	119
TOTAL	748	746
4. *By composition* :		
(i) Coniferous	48	48
(ii) Non-coniferous or broad leaved (including bamboo stands)	700	698
TOTAL	748	746

[1]Provisional.

Production of Wood

The production of industrial and fuel wood is an important indicator of the forest development in the country. The annual recorded production of industrial and fuel wood, separately for coniferous and non-coniferous species, together with royalty received by the State Forest Departments during 1976-77 and 1977-78 is indicated in the following table.

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

TABLE 14.9 PRODUCTION OF INDUSTRIAL AND FUEL WOOD

Particulars	1976-77[1]		1977-78[1]	
	Quantity (lakh cubic metres)	Royalty[2] receipt (Rs crores)	Quantity (lakh cubic metres)	Royalty[2] receipt (Rs crores)
1. *Industrial wood*				
(i) Coniferous	14		14	
(ii) Non-coniferous	97		98	
TOTAL	111	127	112	192
2. *Fuel wood (including wood for charcoal)*				
(i) Coniferous	3		5	
(ii) Non-coniferous	151		157	
TOTAL	154	20	162	27

[1]Provisional.
[2]Actual market value of the major forest products is considerably higher than the royalty received by the state governments.

Minor Products

Apart from providing raw materials for pulp, panel products, matchwood and other wood-based industries, forests are also a source of number of useful minor products like bamboo, canes, *kendu* leaves, grasses, essential oils, medicinal plants, lac, resins, fatty oils and fats, gums, tanning materials, dyes, animal products, etc. Quite a number of these are valuable foreign exchange earners.

Table 14.10 gives the royalty received by the state forest departments for all minor forest products during 1976-77 and 1977-78.

TABLE 14.10 MINOR FOREST PRODUCTS AND ROYALTY

(Rs crores)

Particulars	1976-77	1977-78[1]
1 Bamboo	8·59	9·16
2. Grazing and Fodder	5·32	1·79
3. Other minor forest products	116·05	138·22
TOTAL	120·96	149·17

[1]Provisional

Man-made Forestry Development

The afforestation programmes under man-made forestry form a very important component of the national programme for renewing forest resources. These programmes lay special emphasis on planting of fast growing species, particularly those of economic and industrial value for a large variety of raw materials needed for various national uses and wood based industries. There are various afforestation schemes under state plans and a total area of about 34 lakh million hectares had been brought under man-made plantations up to March 1979.

Establishment of Forest Development Corporation

Considering the budgetary and financial constraints required for forest development in the country, it has become necessary to attract institutional Finance for the purpose as per the recommendation of the National Commission on Agriculture. Sixteen autonomous Forest Development Corporations in various states and union territories have so far been set up. Their main functions are logging, marketing timber and minor forest produce, raising new plantations and developing infrastructure to exploit forest resources through large scale investment in economically viable projects.

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

Forest Resources Survey

Central scheme relating to pre-investment survey of Forest Resources Survey aims at investigating the economic availability of raw materials for establishment and development of wood-based industries in selected areas of the country. The targeted area of such survey during 1979-80 is expected to be about 57,229 sq. km. The total area surveyed and assessed for potential growth by this organisation since its inception is about 23,428 sq. km.

Education Research and Training

The Forest Research Institute and Colleges at Dehra Dun, is the main centre for research in forestry and forest products and for imparting forestry education. Work on research development schemes at a total outlay of Rs 11.10 crores is being carried out under the auspices of the Forest Research Institute.

To train Indian Forestry personnel in the modern business aspect of forest resources an Indian Institute of Forest Management was established at Ahmedabad in 1978 with the assistance of Swedish International Development Agency.

Planning Project Formulation Resources Appraisal and Evaluation

A Planning, Project Formulation Resources Appraisal and Evaluation Cell headed by the Additional Inspector General of Forests has been established in Forestry Division (Department of Agriculture). Major objectives of the cell are : (i) to guide social forestry programmes and to evolve a suitable methodology to secure involvement of the local people, (ii) to coordinate the activities of the State Forest Development Corporations, (iii) to appraise and evaluate the projects for State Forest Development Corporations and (iv) to prepare and negotiate projects for external assistance.

During 1979-80, 11 projects were formulated under the various bilateral and multilateral assisted programmes with an overall investment of $ 17.24 crores including local inputs. Two social forestry projects in Uttar Pradesh and Gujarat have been negotiated with the World Bank for a total investment of $ 12.05 crores.

IRRIGATION

The vulnerability of India's agriculture, owing to the vagaries of the monsoon, has made it imperative to accord irrigation a high priority in the national development plans. Over 934 major and medium projects were taken up between 1947 and 1978-79, of which over 526 have been completed and many others have started yielding partial benefits. The irrigation potential has increased to more than its double, since the beginning of the First Plan. The total irrigated area in the country, which was about 2.26 crore hectares in 1950-51, rose to about 5.85 crore hectares in 1978-79. The total cropped area at the end of 1976-77 was about 16.70 crore hectares.

Growth and Utilization of Irrigation Potential

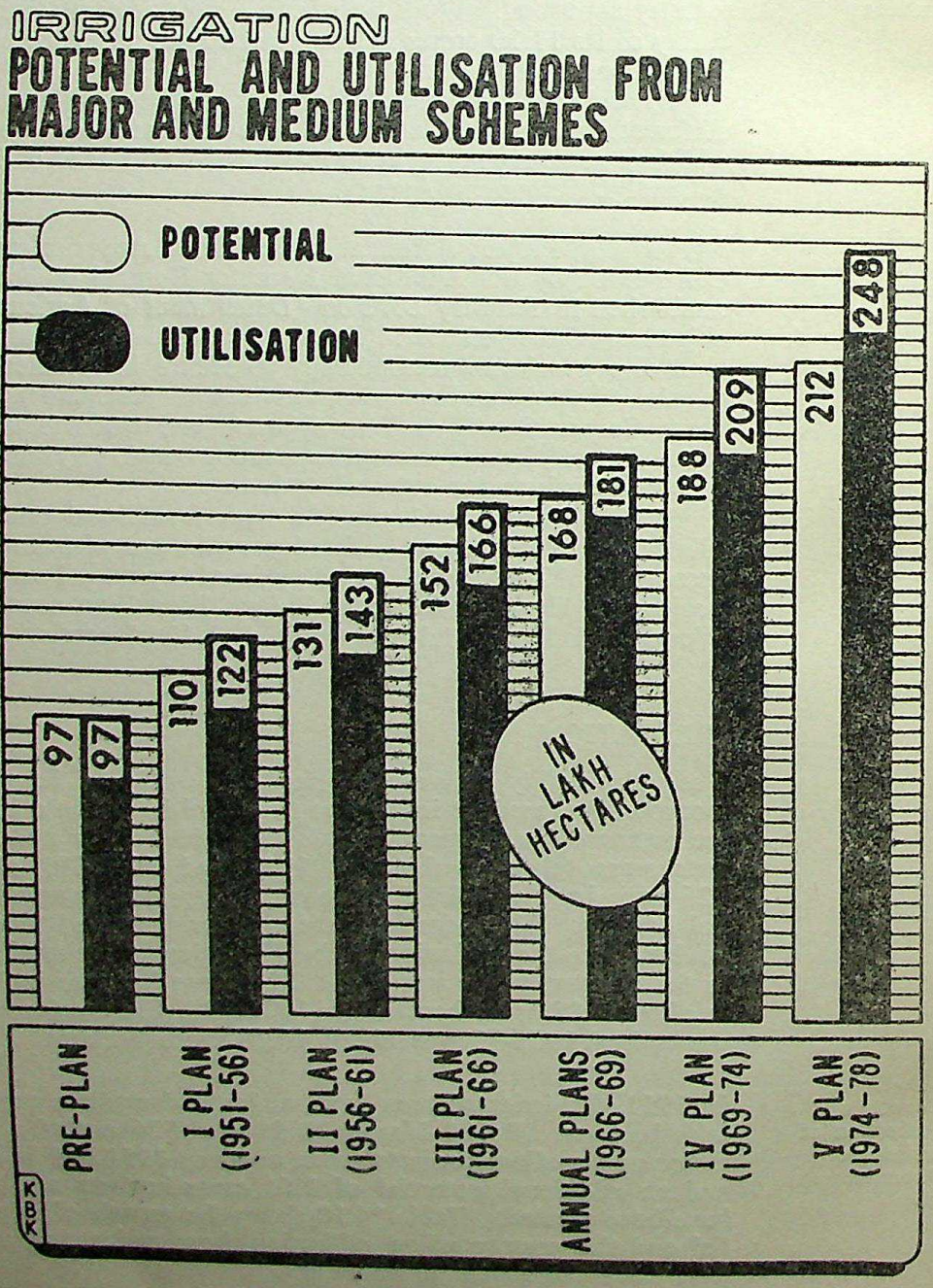
In 1951, the irrigated area from major and medium projects was 97 lakh hectares. By 31 March 1979, over 526 out of a total of 934 major and medium projects taken up since 1951 had been completed and an additional potential of 1.51 crore hectares was estimated to have been created. Table 14.10 shows the growth of irrigation potential and the corresponding utilization from major and medium projects since the advent of planning.

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

(*lakh hectares*)

(Major and Medium Projects)

	Additional potential at the end of				
	Ist Plan	2nd Plan	3rd Plan	4th Plan	5th Plan
Potential . . .	25	46	69	112	151
Utilization . . .	13	34	55	91	115



CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

Irrigation and Multi-purpose Projects

Some of the major irrigation and multi-purpose projects are described briefly in the following paragraphs.

Nagarjunasagar (Andhra Pradesh)

The Nagarjunasagar project comprises the construction of a 1,450-metre long masonry dam with 3,414-metre long earthen flanks on the Krishna river near Nandikonda village, about 144 km from Hyderabad and two canals, one on each side of the river. The 204-km long right bank canal and the 179-km long left bank canal will together irrigate 8.67 lakh hectares. The dam has been completed and work on the canals is under way. An irrigation potential of 5.92 lakh hectares out of a total potential of 8.67 lakh hectares had been created by 1978-79.

Tungabhadra (Andhra Pradesh and Karnataka)

A joint project of Andhra Pradesh and Karnataka, the Tungabhadra project comprising a 2.441-metre long and 49.33-metre high dam on the Tungabhadra river, was completed in 1956. Work on the canals and distribution system has also been largely completed. Out of irrigation potential of 3.92 lakh hectares, a total irrigation potential of 3.51 lakh hectares had been created by the end of 1973-74.

Pochampad (Andhra Pradesh)

The Pochampad project in Andhra Pradesh envisages construction of an 812-metre long and 43-metre high masonry dam with earthen flanks across the river Godavari. There will be a 113-km long right bank canal to irrigate an area of 2.67 lakh hectares. Work on the dam and the canal is in progress. An irrigation potential of 1.17 lakh hectares had been created by 1978-79.

Gandak (Bihar and Uttar Pradesh)

Bihar and Uttar Pradesh are the participating states in the project. Nepal, under an agreement signed with India in 1959, also derives irrigation and power benefits from it. The irrigation potential of the project is 14.83 lakh hectares.

The 740-metre long barrage and appurtenant works were completed in 1969-70. The main western canal was opened in December 1972. Partial irrigation has commenced from the main eastern canal. The Nepal eastern canal was inaugurated in 1973. The project is to be completed during the Sixth Plan. An irrigation potential of 9.34 lakh hectares had been created by 1978-79 in Bihar and Uttar Pradesh.

Kosi (Bihar)

The multi-purpose Kosi project in Bihar envisages irrigation, flood control and other benefits. An agreement on the project was signed between India and Nepal in 1954 and revised in 1966. The irrigation potential of the project is 4.34 lakh hectares. Flood embankments under the project were completed in 1959.

The barrage near Hanumannagar in Nepal was inaugurated in 1965. The eastern Kosi canal system is practically complete except for the distribution system and drainage.

Four more schemes have been sanctioned under the second stage of the project. They are : a 20 mw power house, the western Kosi canal, the Rajpur canal and extension of the flood embankments.

The western Kosi canal project provides for the construction of a 112.65-km long main canal taking off on the right bank of the Kosi barrage at Hanumannagar. The first 35.2 km of the main canal lies in Nepal. The project, after completion, would irrigate 3.14 lakh hectares. The Rajpur canal scheme, envisaging construction of a branch canal of the eastern main canal, will irrigate an area of 1.25 lakh hectares. Out of an ultimate irrigation potential of 8.73 lakh

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

hectares, potential of 4.57 lakh hectares had been created by the end of 1978-79.

Kakrapara (Gujarat)

The Kakrapara project in Gujarat is the first phase of the development of the Tapi valley. A 621-metre long and 14-metre high weir near Kakrapara in Surat district was completed in 1953. Most of the earthwork on the canals and distributaries has been completed. An irrigation potential of 2.27 lakh hectares out of an ultimate potential of 2.28 lakh hectares had been created by 1977-78.

Ukai (Gujarat)

The Ukai multi-purpose project in Gujarat consists of a 4,928-metre long and 68.6-metre high dam across Tapi river near the village Ukai. The project will irrigate 1.53 lakh hectares and generate 300 mw of power. Ukai dam and power house have been completed. An irrigation potential of 1.48 lakh hectares had been created by the end of 1978-79.

Mahi (Gujarat)

The Mahi project in Gujarat has two stages, Stage I consists of a 796-metre long and 20.6-metre high masonry pick-up weir across the Mahi river near Wanakbori village. A 74-km long canal takes off on the right side to irrigate a total area of 1.86 lakh hectares.

Stage II envisages construction of a 1,430-metre long and 58-metre high composite dam across the river Mahi near Kadana to irrigate an area of 89,000 hectares in addition to area under Stage I. The work on Kadana is in an advanced stage of construction.

Out of an ultimate potential of 2.75 lakh hectares, 2.49 lakh hectares of potential had been created by 1978-79.

Bhadra (Karnataka)

The Bhadra multi-purpose project across the river Bhadra in Karnataka, when completed, will irrigate 1.06 lakh hectares of land and generate 33 mw of power. An irrigation potential of 99,000 hectares had been created by 1978-79.

Upper Krishna (Karnataka)

The Upper Krishna project in Karnataka consists of the Narayanpur dam across the Krishna river with a canal taking off from the left bank and the construction of a dam at Almatti. The project has started yielding benefits. An irrigation potential of 7,000 hectares had been created by 1978-79. Ultimate potential of the project is 4.08 lakh hectares.

Ghataprabha (Karnataka)

The Ghataprabha Valley development scheme envisages harnessing of water of the river Ghataprabha for irrigation in Belgaum and Bijapur districts of Karnataka. It is proposed to be implemented in three stages. So far, two stages approved earlier are under execution. The third stage was approved in 1976. Stage I of the project envisages a masonry weir, 2,085-metre long and 9-metre high across the river Ghataprabha at Dhupdal, with a left bank canal 71 km long. It is practically complete. State II envisages construction of a composite dam, 5,275-metre longand 50-metre high at Hidkal and extension of Ghataprabha left bank canal from 71 km to 114 km. The works under stage II are practically complete. State III envisages raising of Hidkal dam and construction of a 202 km long right bank canal taking off from Hidkal dam. It will have an ultimate potential of 1.78 lakh hectares. Out of an ultimate potential of 5.02 lakh hectares a

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

potential of 3.32 lakh hectores had been developed till the end of 1978-79.

Malaprabha (Karnataka)

The Malaprabha project, a 164-metre long and 43.4-metre high masonry dam, will be constructed across the Malaprabha in Belgaum district of Karnataka and canal systems taking off from both flanks of the reservoir. The project has an ultimate potential of 2.06 lakh hectares. Out of this, a potential of 99,000 hectares had been developed till the end of 1978-79.

Tawa (Madhya Pradesh)

The Tawa project envisages the construction of a reservoir across the Tawa river, a tributary of the Narmada, in Hoshangabad district (Madhya Pradesh). The 1,630-metre ong dam will be earth-*cum*-masonry type. On completion, the project will irrigate about 3.32 lakh hectares. The project is in an advanced stage of construction and part benefits have started flowing. A potential of about 1.86 lakh hectares has already been created.

Chambal (Madhya Pradesh and Rajasthan)

The Chambal project is being jointly executed by Madhya Pradesh and Rajasthan. In the first stage, the Gandhi Sagar dam and its 115 mw power station and the Kota barrage were completed. The Rana Pratap Sagar dam with a power house of 172 mw capacity was constructed in the second stage. The third stage comprises the construction of the Jawahar Sagar dam and a 99 mw power station. With the completion of all the three stages, the project will generate 386 mw of power. Out of the ultimate irrigation potential of 4.92 lakh hectares, a potential of 4.62 lakh hectares had been created by the end of 1978-79.

Bhima (Maharashtra)

The Bhima project envisages construction of two dams, one on the Pawana river near Phagne in Pune district and the other across the Krishna river near Ujjaini in Sholapur district. The Pawana dam will be 1,700-metre long and 43-meter high. The Ujjaini dam will be 2,467-metre long and 56.4-metre high. The work on Pawana component of the project is complete. Ujjaini dam is nearing completion. The 160-km long main canal will take off from the left bank. The project will have an irrigation potential of 1.64 lakh hectares. A potential of 23,000 hectares had been created by the end of 1978-79.

Jayakwadi (Maharashtra)

The Jayakwadi project envisages the construction of a 37-metre high earthen dam with a masonry spillway across the river Godavari in Maharashtra in the first stage. A 185-km long canal will take off from the left side to irrigate an area of 1.42 lakh hectares. The second stage of the project, envisages construction of a 133 km canal on the right side, a 30.5-metre high and 6,090-metre long dam across Sindphana river at Majalgaon and a right bank canal from Majalgaon dam. Another 1.36 lakh hectares would get irrigated when stage II is completed.

Out of an ultimate potential of 2.78 lakh hectares, a potential of 98,000 hectares was created by the end of 1978-79.

Hirakud (Orissa)

The 4,801.2 metre long main Hirakud dam in Orissa, the world's longest, impounds 815 crore cubic metres of the Mahanandi waters. The project irrigates an area of 2.51 lakh hectares. Its present installed power generation capacity is 270.2 mw.

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

Mahanadi Delta Scheme (Orissa)

The Mahanadi delta irrigation scheme, also in Orissa, is being executed to make use of the releases from the Hirakud reservoir. On completion, it will irrigate 5.62 lakh hectares. Out of this, an irrigation potential of 5.15 lakh hectares had been created till the end of 1978-79.

Bhakra Nangal (Punjab) Haryana and Rajasthan)

A Joint venture of Haryana, Punjab and Rajasthan, the Bhakra Nangal project is India's biggest multi-purpose river valley scheme so far, completed at a cost of Rs 236 crores. It consists of a straight gravity dam, 518-metre long and 226-metre high, across the Sutlej at Bhakra, the 29-metre high Nangal dam, the 64-km long Nangal hydel channel, two power houses at Bhakra dam, two more power stations on the hydel channel at Ganguwal and Kotla with a total installed capacity of 1,204 mw, about 1,100 km of canals and about 3,400 km of distributaries. The Bhakra dam impounds 935.5 crore metres of water. The canal system of the project is now irrigating 14.8 lakh hectares.

Beas (Punjab, Haryana and Rajasthan)

The Beas Project, another joint venture of Punjab, Haryana and Rajasthan, consists of (i) Beas Sutlej Link, (ii) the Beas Dam at Pong and (iii) Beas Transmission System. The estimated cost of the Beas Project including Beas Transmission Lines is Rs. 715 crores.

The Beas Sutlej Link project is principally a power project with an installed capacity of 4 units of 165 mw each, with a provision for two extension units of 165 mw each. The civil works and conductor system (including Pondoh diversion Dam) have been substantially completed. The first unit has been energised in October 1977 when the waters of Beas river were put into Sutlej river at Slapper (Himachal Pradesh). All the four units have now been commissioned and work on the extension units has been taken in hand.

The Beas Dam at Pong, principally an irrigation project, is a 133-metre high earth-rockfill dam and has an installed capacity of 4 power units of 60 mw each, with a provision for extension of two units of 60 mw each. The dam was raised to its full height in June, 1974 when water was stored in the reservoir for regulated flow for irrigation in Rajasthan and some areas in Punjab.

Thein Dam (Punjab,

Thein Dam Project, costing Rs 263.00 crores, envisages construction of a 147-metre high earthen dam across the river Ravi in Punjab and a power plant on its left bank with an installed capacity of 480 mw. It includes UBDC Hydel Project stage II which is to give an additional power of 56 mw over and above 133 mw of power from the Thein Dam. The reservoir to be formed behind the dam is to have an area of about 31.5 sq. miles and a live storage capacity of 1.9 MAF. An area of 3.48 lakh hectares is likely to get irrigation benefits.

In an inter-state meeting taken by the Prime Minister on 3 October 1977, it was decided that the project would be implemented by Punjab State and that an inter-state control board would be set up to take policy decisions and give directions during construction and operation stages.

Rajasthan Canal (Rajasthan)

The Rajasthan Canal Project will provide irrigation facilities to the north-western region of Rajasthan which is a part of the Thar desert. The project, which will use waters from Pong dam, consists of the 204-km long Rajasthan feeder canal (with the first 167 km in

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

Punjab and Haryana and the remaining 37 km in Rajasthan) and the 445-km long Rajasthan main canal lying entirely in Rajasthan.

The first stage of the project consists of the construction of the feeder canal in full and 183-km of the main canal and 3,000-km long distribution system. The feeder and the main canal have been completed.

The second stage covers the construction of the remaining 256 km of the main canal and the 3,500-km long distribution system. The work on stage II has also been started and is scheduled to be completed by 1985-86. The project will ultimately irrigate about 12.54 lakh hectares. An area of 5.44 lakh hectares was brought under irrigation command by March 1979, of which 3.21 lakh hectares had actually been irrigated by March 1979.

Parambikulam Aliyar (Tamil Nadu and Kerala)

This joint venture of Tamil Nadu and Kerala envisages the integrated harnessing of eight rivers, six in the Annamalai Hills and two in the plains. The scheme will irrigate about 95,000 hectares and also have an installed power generating capacity of 185 mw. A potential of 95,000 hectares had been created up to the end of 1978-79.

Sarda Sahayak (Uttar Pradesh)

Sarda Sahayak Project envisages construction of (i) a 1,003-metre long barrage across the river Ghagra, (ii) a link channel of 28 km length, (iii) a 811-metre long barrage across the river Sarda, (iv) a feeder channel of 260 km length involving construction of two major aqueducts over Gomti and Sai and (v) remodelling of 6,450 km of distribution system and construction of 2,570 km of new channels. The works are being executed in five stages. Stage I and II have been practically completed and commissioned.

Out of an ultimate irrigation potential of 15.82 lakh hectares, 8.69 lakh hectares potential had been created by the end of 1978-79.

Ramganga (Uttar Pradesh)

The Ramganga, a major tributary of the Ganga in Uttar Pradesh, is being tamed with a 625-metre long and 125.6-metre high earth and rock-fill dam and a 72-metre high saddle dam in the Garhwal district. The project will irrigate 5.91 lakh hectares, have an installed power capacity of 198 mw, supply 200 cusecs of water for the Delhi water supply scheme and reduce the intensity of floods in central and western Uttar Pradesh. The project is nearing completion; the dam was completed in June 1974. An irrigation potential of 5.75 lakh hectares had been created by the end of 1978-79.

Farakka (West Bengal)

The Farakka project in West Bengal was taken up for the preservation and maintenance of Calcutta port and for improving the navigability of the Hooghly. It consists of a barrage across the Ganga at Farakka, a barrage at Jangipur across the Bhagirathi, a 39-km long feeder canal, taking off from the right bank of the Ganga at Farakka and tailing into the Bhagirathi below the Jangipur barrage and a road-*cum*-rail bridge over the Farakka Barrage.

Construction work was started in 1963-64; the two barrages and the road-*cum-rail* bridge have been completed. Following the Indo-Bangladesh agreement of 18 April 1975, the scheme was commissioned on 21 April 1975. Work on the navigation structures is in progress.

Mayurakshi (West Bengal)

The Mayurakshi project in West Bengal comprises the Canada dam, 640-metre long and 47.24-metre high, and irrigates about 2.51 lakh

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

hectares of land. The hydro-electric plant produces four megawatt of power. The project is partially complete. An irrigation potential of 2.51 lakh hectares was created by the end of 1978-79.

Kangsabati (West Bengal)

The Kangsabati project in West Bengal envisages the construction of earthen dams, connected together by intermediate dykes, on the Kangsabati and Kumari rivers. Its canal system would cross the Silabati, Bhairoh Banki and Terafeni rivers, on which three pick-up barrages will be constructed. The project will benefit an area of 4.02 lakh hectares. A potential of about 2.85 lakh hectares had been created by 1978-79.

Damodar Valley Project (West Bengal and Bihar)

The Damodar Valley Project was conceived for the unified development of irrigation, flood control and power generation in West Bengal and Bihar. The project is administered by the Damodar Valley Corporation (DVC), established in 1948. The DVC has completed multi-purpose dams and hydel power stations at Tilaiya, Konar, Maithon and Panchet, a 692-metre long and 11.58-metre high barrage at Durgapur, 2,495 km of irrigation canals and three thermal power houses at Bokaro, Chandrapura and Durgapur. The irrigation potential of the project is about 5.15 lakh hectares and its installed power generating capacity is 1,181 mw, made up of 1,077 mw of thermal and 104 mw of hydel power. A potential of 3.54 lakh hectares had been created by the end of 1978-79.

FLOOD CONTROL

After the extremely severe floods experienced in 1954, it was considered that efforts in the field of flood control need to be intensified on the basis of a well planned programme. Accordingly, National Flood Control Programme was launched in 1954. The programme was divided into three phases—immediate, short-term and long-term. The immediate phase was devoted to intensive collection of data and execution of emergent flood protection measures. The short-term programme which was roughly to coincide with the Second Five Year Plan, envisaged the construction of embankments, protection of some towns, raising of villages etc. The long-term phase envisaged the construction of storage reservoirs stabilising the benefits of the works already carried out as well as taking up of additional works of embankments, river draining etc.

Flood Control Bodies

At the state level, technical advisory committee examines the proposals, which are approved by the state flood control boards which also lay down policies at the state level. At the national level, major schemes are examined in detail by the Central Water Commission/Ganga Flood Control Commission and then approved by the Planning Commission. The Central Flood Control Board formulates policies at national level.

Because of the complexity and magnitude of the flood problem in the Brahmaputra valley and north Bengal rivers, flood control commissions have been set up by the Governments of Assam and West Bengal for implementing a comprehensive plan of flood control. The Government of India has constituted the Brahmaputra Flood Control Board and the North Bengal Flood Control Board to lay down policies, approve schemes and fix priorities. The Ganga Flood Control Board and the Ganga Flood Control Commission have also been constituted by the central government to prepare a comprehensive flood control

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

plan for the Ganga basin and co-ordinate its implementation by the concerned states.

Rashtriya Barh Ayog

Taking into account the magnitude and complexity of the flood problem in the country, considerable experience that has been gained in planning, implementation and performance of the flood control measures during the last 20 years and the advancement of technology not only in India but also in foreign countries, the Government of India constituted the *Rashtriya Barh Ayog* in July 1976. This Ayog has conducted in-depth-study of the present approach and programmes of flood control measures and evolve a coordinated, integrated and scientific approach to the flood control problem and draw up a National Plan fixing priorities. The Ayog is expected to submit its report in 1980.

Progress

Since the commencement of the National Flood Control Programme in 1954, nearly 11,410 km length of embankments, 20,650 km length of drainage channels and 280 town protection schemes and raising of the level of 4.700 villages had been completed by the end of 1979. These works carried out at a cost of Rs. 801 crores, have afforded reasonable protection to an area of nearly 105 lakh hectares. In addition to these flood protection measures, a number of reservoir projects have been completed which have helped to mitigate the flood problem in the river channels downstream. Notable among these are Hirakud Dam on river Mahanadi, Konar, Maithon, Panchet and Tilaiya Dams on river Damodar, Bhakra on river Sutlej, Pong on river Beas and Ukai on river Tapi. The central government has also set up a Flood Forecasting Organisation to issue advance warnings about impending floods so as to alert the agencies concerned with rescue and relief to organise themselves and also to put into action the flood fighting and maintenance organisations to gear up to the emergency. The Central Flood Forecasting Organisation with headquarters at Patna has three circles at Gauhati, Maithon and Delhi with divisions at Dibrugarh, Gauhati, Jalpaiguri, Asansol, Patna, Lucknow, Jhansi, Bhubaneshwar, Hyderabad, Delhi, Gandhinagar and Surat. The warnings issued by control rooms under these divisions have been found to be extremely useful to the public.

In the Sixth Plan the outlay proposed for flood control was Rs 902.39 crores as compared to Rs 345.27 crores in the Fifth Plan. The actual expenditure during first year 1978-79 of the Sixth Plan amounted to Rs 154.75 crores. The anticipated expenditure during 1977-78 was about Rs 147.48 crores. The area protected during four years of the Fifth Plan is estimated to be about 19 lakh hectares and up to March 1979 was 105 lakh hectares.

Floods of 1979

The rainfall during 1979 was below normal over large parts of the country, *viz.*, Andaman and Nicobar Islands, sub-Himalayan West Bengal, Sikkim, Bihar plateau, Uttar Pradesh, Haryana, Chandigarh and Delhi, Punjab, Himachal Pradesh, Jammu and Kashmir, east Rajasthan, Madhya Pradesh, Gujarat, Daman, Dadra and Nagar Haveli, Konkan and Goa, coastal Andhra Pradesh and Telengana creating near drought conditions. But, cyclonic storms accompanied by heavy rains and flash floods caused considerable damage in parts of coastal Andhra Pradesh, Gujarat, Rajasthan, parts of Uttar Pradesh and north Bihar.

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

A severe cyclone hit the Andhra coast on May 12 and unprecedented rains during July 15-20 affected parts of as many as 10 districts in Rajasthan. Due to unprecedented rainfall in Rajkot on 11 August and consequent floods in the river the Machhu-II earthen-*cum*-masonry dam in Gujarat got overtopped and the earthen flanks breached, causing havoc in Morvi and Malia taluks. Parts of Assam, Haryana Himachal Pradesh, Karnataka, Kerala, Madhya Pradesh, Maharashtra, Orissa, Punjab, Tamil Nadu and West Bengal were also affected by floods. During the first fortnight of November 1979, due to depression in the Bay of Bengal there was widespread rainfall throughout Tamil Nadu with intense rainfall in the districts of Tirunelveli, Kanyakumari, Madurai and Ramanathapuram. Almost all the reservoirs and tanks in the state were filled up to their full capacity during this period. The river Vaigai passing through Madurai town was in floods and inundated large areas along its course.

Preliminary assessment of the flood damage reported by the state governments and union territories indicate that an area of over 40 lakh hectares and a population of nearly 1.78 crores were affected. Crops over an area of 21 lakh hectares valued at Rs 96.60 crore, 13.07 lakh houses valued at Rs 215.58 crores and public utilities worth Rs 163.83 crore were damaged. The fury of floods and rains took a toll of 3,168 human lives and 4,44,113 cattle head. The total damage to crops, houses and public utilities in the country as a whole has been estimated at Rs 4,760 crores.

ANTI-SEA EROSION

India has a coast-ine of 6,100 km. In all the seven states which share the sea front, the problem of sea erosion exists in various degrees. It is however, of a serious nature in a stretch of about 320 km of 560 km coastline in Kerala. Protection measures have been taken up since the end of the First Plan and by the end of the Fifth Plan a length of 189 km had been protected at a cost of about Rs 28 crore. Out of this, an amount of Rs 6.42 crores has been provided as special assistance by the central government. Of this Rs 10 crores were spent during the Fourth Plan. During 1978-79, an expenditure of Rs 6.76 crores had been incurred. It has been proposed by the state governments to protect the entire affected length of 320 km by 1982.

CENTRAL ORGANISATIONS

There are three central organisations, which are responsible for planning, development and research in the field of irrigation.

The Central Water Commission is responsible for initiating and co-ordinating, in consultation with state governments, schemes for control, conservation and utilization of water resources for purposes of irrigation, navigation and flood control throughout the country. The Commission has been playing an important role in planning, investigation, designing and research on multipurpose river valley projects and flood control.

The Central Board of Irrigation and Power, constituted in 1927, initiates fundamental research in the fields of irrigation and power and co-ordinates the work of research stations, established in different parts of the country. The Board also disseminates the results of the studies and information on irrigation and power development both in side the country as well as abroad.

The third organisation is the Central Water and Power Research Station at Khadakwasla near Pune. It is the premier research station in south-east Asia dealing with a variety of subjects in the field of

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

water resources development. Since its inception, 62 years ago, the research station has achieved a high degree of specialisation in a number of disciplines. It has also been recognised as the regional laboratory for the Economics and Social Commission for Asia and the Pacific (ESCAP).

Water and Power Consultancy Services

The irrigated area in the country has increased from 2.2 crore hectares to 5.2 crore hectares, food production from 5.00 crore tonnes to over 13.00 crore tonnes and the power generating capacity from 2,000 mw to 26,000 mw. This phenomenal progress in the field of irrigation, agriculture and power has been accompanied by corresponding growth and development of expertise and experience. To share this experience and expertise with other developing countries the Government of India set up the Water and Power Development Consultancy Services (India) Limited (WAPCOS) in 1969. Presently WAPCOS is registered with several international funding agencies like World Bank, Asian Development Bank (ADB), United Nations Development Programme (UNDP), Food and Agricultural Organisation (FAO), Kuwait Fund for Arab Economic Development, Arab Bank for Economic Development in Africa (BADEA), International Fund for Agricultural Development (IFAD), etc.

The WAPCOS provides consultancy services for planning and development of irrigation, drainage, flood control and river training works, ground water resources, irrigated agriculture, land reclamation, drinking water supply, generation and transmission of hydro and thermal power, resettlement of transmigrants, etc. The range of services provided is comprehensive inter-disciplinary coverage of all aspects of consultancy ranging from feasibility studies, detailed investigations, designs, construction, supervision, operation and maintenance. These services are provided by the Company through its own personnel and through the pooled expertise available from its constituents and various other specialised organisations of the central and state governments. The principal constituents of the Company include Central Water Commission, Central Electricity Authority, Geological Survey of India, Survey of India, India Meteorological Department, Central Ground Water Board, Indian Council of Agricultural Research, National Institute of Community Development, etc.

The countries where WAPCOS has rendered and is rendering consultancy services include Afghanistan, Bhutan, Burma, Fiji Islands, Indonesia, Iraq, Laos, Malaysia, Mauritius, Nepal, Nigeria, Philippines, Sri Lanka and Tanzania. In addition, WAPCOS in association with World Bank, Food and Agriculture Organisation and International Fund for Agricultural Development has been engaged in preparation of feasibility-cum-appraisal reports for Composite Irrigation Projects in Maharashtra and Madhya Pradesh, Subernarekha Project covering Bihar, Orissa and West Bengal and Ganga Canal Modernization Project in Uttar Pradesh.

INTERNATIONAL AGREEMENTS

Indus Commission

India and Pakistan signed the Indus Water Treaty on 19 September 1960, fixing and delimiting the rights and obligations of the two countries with regard to the use of the waters of the Indus river system. It came into force with retrospective effect from 1 April 1960. As envisaged in the treaty, a permanent Indus Commission, representing both the governments, has been set up to establish co-operative arrangements for the implementation of the treaty.

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

Indo-Bangladesh Joint Rivers Commission

The Indo-Bangladesh Joint Rivers Commission was established in 1972 to maintain liaison between the two countries in order to ensure the most effective joint efforts in maximising the benefits from common river systems, to carry out surveys of the river systems shared by them and to formulate joint flood control projects. The Commission has taken up the study of many schemes of mutual benefit.

In pursuance of the agreement of November 1977, between India and Bangladesh on the sharing of the Ganga Waters at Farakka and on augmenting its flows, the commission has been entrusted with the important function of carrying out investigations and study of schemes proposed by either Government for the augmentation of the dry season flows of the Ganga and recommending to the two Governments, suitable schemes or scheme for implementation. The proposals made by India and Bangladesh for augmentation of the dry season flows of the Ganga are under the consideration of the Commission. The sharing of the Ganga waters, as per the agreement of November 1977 was satisfactorily accomplished during January-May 1978-79.

Cooperation with Hungary

A 4-member Indian team attended the third meeting of the working group on water resources development of the Indo-Hungarian Joint Commission held in Budapest in June 1979. The working group reviewed the progress achieved and formulated further proposals for cooperation between the two countries in the fields of earth dam design, water resources management, sprinkler irrigation, ground water exploration and exploitation, hydrological data collection and flood fighting.

Cooperation with USSR

A 5-member Indian delegation attended the meeting of the Indo-Soviet Irrigation and Agriculture Working Group held in June, 1979. The working group reviewed the progress of implementation of the previous protocols on agriculture and irrigation. It also made further proposals for training of Indian engineers in the Soviet Union in the field of designing and construction of high earth and rock-fill dams and concrete dams on non-rocky foundations, study of Soviet experts in India in the field of design and construction of barrages and exchange of technical data.

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

15 RURAL RECONSTRUCTION

Rural reconstruction thus encompasses both spatial and functional at overall socio-economic development of the rural community with a close interaction between different sections and sectors, and for economic growth specifically directed to the needs of the rural poor. The main thrust in all these programmes is towards weaker sections, not only in terms of providing incentives for development but also linking of all economic activities into a well-planned infrastructure. In this multi-pronged effort involving development and conservation of resources—land, water and human—the objective is to raise the standard of living and improve the quality of life, particularly of the poor. Rural reconstruction thus encompasses both spatial and functional integration of all relevant programmes having a bearing on increased agricultural production and provision of gainful employment to rural people.

In addition to the work handled by the erstwhile Department of Rural Development, the Ministry of Rural Reconstruction, constituted in August 1979, shoulders an additional responsibility of the work relating to land reform, village and cottage industries, town and country planning insofar as it relates to rural areas, and that of rural roads. It has a nodal responsibility for elementary education, adult education, rural health, rural electrification, rural water supply (excluding centrally sponsored scheme of accelerated rural water supply), housing for landless rural labour and nutrition programme. It is also responsible for all aspects of rural reconstruction including community development and panchayati raj, special programmes for the betterment of weaker sections of the community like the small and marginal farmers and agricultural labourers, the development of drought prone areas and rural employment and marketing including quality control (Agmark) and development of regulated markets.

COMMUNITY DEVELOPMENT

The community development programme, which has now become a part of the rural development programme, was launched on 2 October 1952. There are at present 5,004 development blocks in the country. The aim of the programme is to bring about an overall development of rural India covering resources and cultural and economic aspects of the community life. This is sought to be achieved through the fullest development of available human and material resources on an area basis and thereby raising the rural community to higher levels of living with the active participation of the people themselves. The highest priority in the programme is accorded to agriculture. Other important sectors include improvement of communications, health, sanitation, housing, education, rural employment, welfare of rural women and children and cottage and small-scale industries.

PROGRAMME PATTERN

At present a community development block covers an area of about 620 sq km with around 100 villages and a population of about 1,00,000. Supply of funds for the blocks remained mainly the responsibility of the central government till the end of the Third Plan (1966). But

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

from the beginning of the Fourth Plan (April 1969), the financial arrangements became the responsibility of the states as the scheme was transferred to the state sector.

POLICY

The Ministry of Rural Reconstruction lays down the broad policy relating to the community development programme. Though the main responsibility for the execution of the programme is that of state governments, the central government helps in developing special programmes with central assistance and guidance.

ORGANISATION

Although a standard staffing pattern has been envisaged for the development blocks, it remains flexible from state to state for operational purposes according to the programme requirements and the size of the blocks. Generally the cadre authority for the block development officers is the department dealing with community development/rural development/panchayati raj in the concerned states, while the cadre authority for extension officers is their respective parental departments in the states. The block development officer/chairman Panchayat Samiti exercises administrative control over block extension staff in most of the states, although there are deviations in some states from the general pattern.

Pattern of Investment

For the Mid-term Plan (1979-83) some modifications have been made insofar as the funding of the programme is concerned. Major emphasis is now laid on block level planning. An amount of Rs 2.50 lakhs has been allocated per block per annum for taking up normal SFDA programme. 1,093 blocks out of 1,818 covered under SFDA programme have been selected for taking up integrated rural development programme (IRDP). Of the 1,093 blocks selected for IRDP 546 blocks have been selected for intensive employment programme for achieving the goal of full employment by 31 March 1981. They have been given an allocation of Rs 10 lakhs per annum per block. The remaining 547 blocks have been selected for normal integrated rural development programme with an outlay of Rs 5 lakhs per block per annum. From 1 April 1979, the cost of the projects under SFDA as well as IRDP is being shared between the Government of India and the concerned state governments on 50 : 50 basis.

SPECIAL PROGRAMMES

Small Farmers, Marginal Farmers and Agricultural Labourers' Programmes

During the Fourth Five Year Plan, 46 Small Farmers Development Agencies (SFDA) and 41 Marginal Farmers and Agricultural Labourers' (MFAL) Projects were initiated to improve the economic conditions of the weaker sections and generate better self employment opportunities. These projects seek to tackle the problems of weaker sections through special agencies set up for the purpose. In the Fifth Plan all the SFDA/MFAL projects were made composite and each agency was required to assist small and marginal farmers and agricultural labourers in its area of operation. The number of agencies had increased to 168 in the Fifth Plan.

For the purpose of these programmes, a small farmer is defined as one having a land holding of 2.5 to 5 acres and marginal farmer below 2.5 acres of dry land. In the case of irrigated lands, the limits of land holding are generally 50 per cent of those indicated above. The landless agricultural labourer is taken as one who does not have any

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

land-holding, but has a permanent homestead and derives more than half of his earnings from agricultural pursuits.

Functions

The functions of the agencies are to identify the participants according to norms laid down, draw up suitable programmes for improved agriculture and subsidiary occupations, arrange credit through institutional sources and get the programmes executed through the existing development and extension agencies in the project areas.

The agencies implement various types of development schemes for the identified participants. The main thrust in the project areas is on crop husbandry. Programmes of subsidiary occupations are also taken up depending upon the suitability of the area for a particular programme and the availability of marketing facilities. The programme for improved agriculture includes land development, soil conservation, minor irrigation, horticulture, demonstrations, introduction of new improved crop varieties, adoption of multiple cropping pattern, etc. Considerable stress is also laid on the adoption of dry land farming techniques and water harnessing measures in rain-fed areas. The subsidiary occupations include supply of milch cows and buffaloes, poultry, piggery, sheep and goat rearing and fisheries. Programmes for the development of rural artisans and rural industries are also taken up by the agencies.

Financial Assistance

The identified small farmers are allowed subsidies up to 25 per cent and marginal farmers and agricultural labourers up to 33 1/3 per cent of the investment cost for various programmes like minor irrigation, land development, soil conservation, animal husbandry, etc. A ceiling of Rs 3,000 has been laid down for such subsidy from project funds to an individual participant during the entire project period. In the case of group community projects like community irrigation works, a liberal subsidy of 50 per cent is allowed from the project funds. Keeping in view the economic backwardness of the farmers belonging to the category of scheduled tribes, a liberal rate of subsidy of 50 per cent has been allowed for taking up individual and community minor irrigation works subject to a maximum ceiling of Rs 5,000 during the project period. The agencies also extend subsidy on custom service charges provided such services are arranged through the state agriculture department or agro-industries corporation or other recognised institutions.

The agencies also provide risk fund at 4 per cent on the additional quantum of short-term loans advanced to identified beneficiaries by the primary agricultural credit cooperative societies and at 2 per cent to the central cooperative banks. The same rates apply for medium term loans also but calculated with reference to the total quantum of loans. For long-term loans, it is at the rate of 2 per cent of the total quantum of loans advanced to identified participants, and is payable to the central land development banks in each state. As subsidies from the project funds are paid in kind through the financing institutions and are linked with loans, the identified participants are also encouraged to become members of cooperatives. For this purpose, interest-free loan for the purchase of four shares of Rs 40 is given by the agency to the small/marginal farmers and agricultural labourers. Similarly medium-term loan up to Rs 10.00 lakhs is given by the agencies to the central cooperative bank in the project area where the bank is not able to advance loans for lack of resources, to

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

provide non-overdue cover for borrowings from the Reserve Bank of India. In addition, emphasis is laid on linking of credit with marketing and the agencies provide 2 per cent rebate on interest on short-term production loans, if the agricultural produce is marketed through the cooperatives. Some assistance is also available for the development of regulated markets and construction of storage godowns.

During the Fourth Plan, agencies allowed managerial subsidy to cooperatives. Some assistance is also available for the development of infra-structure facilities so as to support various programmes for the beneficiaries. During the Fifth Plan, however, managerial subsidy was limited to technical staff employed by the farmers' service societies and large sized multipurpose societies. Small assistance for infrastructure development like setting up of milk collection centres, chilling plants, etc., was also available to cooperatives. The programmes, by and large, are being implemented through existing organisations, government departments and extension staff of the state governments. Credit for participants is arranged through the cooperatives and commercial banks in the project areas.

Beneficiaries

Under the normal SFDA programme, the various agencies have identified 163.14 lakh participants, since inception up to March 1979. Of these 25.61 lakhs belonged to scheduled castes or tribes. Of the total participants 70.32 lakhs were enrolled as members of cooperative societies. The beneficiaries covered under minor irrigation were 7.96 lakhs; dairying 5.12 lakhs; poultry 0.19 lakh; other animal husbandry programme 2.28 lakhs and improved agriculture 55.36 lakhs. Medium-term loans amounting to Rs 98.09 crores and long-term loans amounting to Rs 124.89 crores were disbursed by the cooperatives. Commercial banks disbursed medium-term loans amounting to Rs 112.98 crores. The Government of India released an amount of Rs 198.39 crores to be utilised as subsidy against which the SFDA agencies utilised an amount of Rs 196.33 crores. During 1979-80, an amount of Rs 68.39 crores was provided towards central share for normal SFDA programme, integrated rural development programme in SFDA areas and minor irrigation programme for small/marginal farmers outside the special project areas.

Minor Irrigation Programmes

The Government of India during 1978-79 extended benefit of subsidy for minor irrigation programmes of Agricultural Refinance and Development Corporation or similar type to all the small and marginal farmers outside the special programme areas like SFDA, DPAP, CADP and Desert Development, etc. The rate of subsidy was the same as applicable to SFDA. During 1978-79 Rs 1,634.42 lakhs was approved for assisting small/marginal farmers in 14 states. An amount Rs. 545.01 lakhs was released to states/agencies. During 1979-80 (up to 25 February 1980), Rs 362.81 lakhs was approved for assisting small/marginal farmers outside the special programmes in two states. An amount of Rs 30.64 lakhs was released towards the central share.

In order to benefit farmers holding land between 2 to 4 hectares the central government during 1979-80 decided that subsidy at the rate of 20 per cent of the capital cost for individual minor irrigation programme and 40 per cent for the community minor irrigation programme will be given to all the farmers in this catagory. The programme is to be implemented through the SFDA agencies in their area of operation and the state governments will execute the work in

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

those areas where the SFDA agencies are not in operation.

During 1979-80 (up to 25 February 1980), an amount of Rs 870.30 lakhs had been approved for assisting farmers having land between 2-4 hectares. An amount of Rs 217.40 lakhs has been released towards the central share.

Drought Prone Areas Programme

The Drought Prone Areas Programme aims at long-term development of areas frequently affected by drought through integrated development of local resources in agriculture and allied sectors. The programme seeks to raise the productive capacity of these areas in order to ensure sustained income and employment particularly to the vulnerable sections of the rural society. It, thus, seeks to do away with the need for scarcity relief and create a potential within these areas to cope up with such natural hazards.

The drought prone areas are identified on the basis of factors such as high frequency of drought, low and/or erratic distribution of rainfall, low extent of assured irrigation facilities etc. The programme now covers 74 districts of 13 states, in part or full, spreading over 557 community development blocks.

Since the Fifth Plan, the emphasis of the programme has been on restoration of a proper ecological balance, development and management of irrigation resources, conservation of soil and moisture, afforestation and pastures and development of livestock and dryland agriculture. As the major problems of these areas are due to serious and persistent disturbance of the ecological balance, due emphasis is given for improvement of range lands, introduction of controlled grazing, afforestation, shelter belts and wind breaks, stabilisation of sand dunes etc. As these areas have a built-in advantage for dairy development cattle, dairy and sheep development is given adequate importance.

During 1979-80, an expenditure of about Rs 19 crores was incurred on this programme till September 1979. Irrigation potential of 16,200 hectares was created; 1.54 lakh hectares of land was treated with soil and moisture conservation measures and 53,000 hectares of land was brought under improved pastures and afforestation. 3,294 milch animals were distributed to the families of the weaker sections, 181 milk societies and 25 sheep societies were established. About 4.92 lakh families were assisted, of which 1.82 lakhs belonged to scheduled castes and about 60,000 to scheduled tribes. Employment of 129 lakh mandays was generated.

Livestock Production Programme

The Special Livestock Production Programme is aimed at providing employment opportunities to the weaker sections and the rural masses. During 1979-80 (up to September 1979), a total of 268 projects were functioning in 183 districts of various states/union territories and benefited 94,830 small farmers/marginal farmers/agricultural labourers, members of the scheduled castes and tribes, bringing the total number of persons benefited to 2,56,300.

The programme is being implemented on a subsidy *cum* loan basis. Loans are arranged through the nationalised and the co-operative banks. The centrally sponsored scheme for cross-breed calf rearing provides feed subsidy at the rate of 50 per cent to small and marginal farmers and 66.2 per cent to agricultural labourers. Under the central sector scheme for poultry, piggery and sheep production, the subsidy is given to the extent of 25 per cent to small farmers and 33 1/3 per cent to marginal farmers and

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

agricultural labourers and 50 per cent to the members of the scheduled tribes. The unit size of poultry, sheep and piggery has been raised so as to provide gainful employment to agricultural labourers and other identified beneficiaries under the programme.

Integrated Rural Development

Integrated Rural Development (IRD) involves the better integration of various components of special area development programmes for the benefit of weaker sections of the community including scheduled castes and tribes and for tackling the problems of rural under-employment and unemployment. The focus of the programme is on the target groups consisting of small/marginal farmers, landless labourers, share croppers, rural artisans, etc., who are presently below the poverty line. The programme covers those rural development blocks where any of the special programmes namely, 'small farmers development agency', 'drought-prone areas programmes' and 'command area development programme' are already in operation and also those areas where no special programme is operating.

The primary objective of IRD programme is to generate additional employment and raise the income level of identified target groups. For achieving this objective, the identified beneficiaries are provided subsidy for taking up various activities in the primary, secondary and tertiary sectors. While the intensification of development effort in agriculture and other allied activities will create additional employment opportunities, this, in itself may not be able to solve the problem of unemployment and under-employment in the rural areas. It is in this context that secondary and tertiary sectors have also been included for getting assistance under the IRD programme. The other important feature of the programme is that instead of providing assistance on a piecemeal basis to the identified beneficiaries, the programme aims at adopting the family as a unit and enables the family to undertake productive investment on various schemes the returns of which are large enough to lift the family above the poverty line. The programme thus, aims at providing a package of schemes for the identified family and assist it to cross the poverty line.

In 1978-79, 2,000 out of the 3,000 blocks covered by one or other of the three special programmes, were selected for taking up IRD programme. In addition 300 blocks were taken up from those areas where no special programme was operating. Starting from 1978-79, it is proposed to cover under the integrated rural development programme 300 new development blocks each year from areas not covered earlier by any special programme. The number of blocks allotted to each state/union territory during 1978-79 and 1979-80 under the integrated rural development programme is given in table 15.1.

Of the 2,000 IRD blocks selected from the special programme areas, 1,000 blocks were allocated Rs 5 lakhs per block and the other 1,000 blocks Rs 10 lakhs per block. The 300 blocks selected from the non special programme areas were allocated Rs 2 lakhs per block in the initial year and the allocation is to be enhanced at the rate of Rs 1 lakh per block in the subsequent years. Thus, the 300 blocks selected during 1978-79 would get an allocation of Rs 6 lakhs per block in the terminal year of the Sixth Plan. In addition, a provision of Rs 60,000 per block has been made for conduct-

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

TABLE 15·1

DISTRIBUTION OF BLOCKS UNDER VARIOUS PROGRAMMES OF RURAL DEVELOPMENT

State /Union territory	Total no. of blocks	Number of blocks covered								IRD blocks (Area Planning for Employment)		Total IRDP blocks (10+11+12)
		CADP	DPAP	SFDA	Total	IRD blocks			Total	1978-79	1979-80	
						CADP	DPAP	SFDA				
1	2	3	4	5	6	7	8	9	10	11	12	13
States												
Andhra Pradesh	324	74	72	134	220	45	43	80	168	6	16	190
Assam	134	7	—	58	65	4	—	35	39	15	15	69
Bihar	587	213	57	236	506	128	34	142	304	6	15	325
Gujarat	218	32	41	86	159	19	25	52	96	4	3	103
Haryana	87	22	12	32	66	13	7	19	39	9	9	57
Himachal Pradesh	69	—	—	18	18	—	—	11	11	18	21	50
Jammu and Kashmir	75	4	12	46	62	3	7	28	38	2	2	42
Karnataka	175	34	42	66	142	20	25	40	85	6	12	103
Kerala	144	17	—	58	75	10	—	35	45	13	5	63
Madhya Pradesh	458	36	42	131	209	22	25	79	126	58	28	212
Maharashtra	296	42	33	118	193	25	20	71	116	11	6	133
Manipur	26	1	—	7	8	1	—	4	5	6	1	12
Meghalaya	24	—	—	12	12	—	—	7	7	3	1	11
Nagaland	21	—	—	21	21	—	—	13	13	—	—	13
Orissa	314	50	25	115	190	30	15	69	114	13	4	131
Punjab	117	—	—	76	76	—	—	46	46	10	15	71
Rajasthan	232	17	78	76	171	10	47	46	103	9	10	122
Sikkim	—	—	—	4	4	—	—	2	2	—	—	2
Tamil Nadu	374	—	48	167	215	—	30	100	130	31	26	187
Tripura	17	—	—	12	12	—	—	7	7	—	1	8
Uttar Pradesh	876	320	39	191	550	193	23	115	331	53	92	476
West Bengal	335	103	34	133	270	62	21	80	163	6	13	182
Union Territories												
Andaman and Nicobar Islands	5	—	—	—	—	—	—	—	—	2	—	2
Arunachal Pradesh	48	—	—	—	—	—	—	—	—	10	—	10
Chandigarh	1	—	—	—	—	—	—	—	—	1	—	1
Dadra and Nagar Haveli	1	—	—	—	—	—	—	—	—	1	—	1
Delhi	5	—	—	5	5	—	—	3	3	—	—	3
Goa, Daman and Diu	12	—	—	12	12	—	—	7	7	—	—	7
Lakshadweep	5	—	—	—	—	—	—	—	—	2	—	2
Mizoram	20	—	—	—	—	—	—	—	—	5	5	10
Pondicherry	4	—	—	4	4	—	—	2	2	—	—	2
Total	5,004	972	535	1,818	3,325	585	322	1,093	2,000	300	300	2,600

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

ing the base-line survey of the households in the blocks selected from the non-special programme areas. The financial allocations indicated above are in addition to the normal level of funding they receive under the special programmes by which they are covered. In view of the changed financing pattern, the financial allocations are shared between the Government of India and the state governments on a 50 : 50 basis.

Under the 'integrated rural development programme', an attempt has been made to integrate the 'area' and the 'beneficiary' development approaches. Initially, it was thought that the funds provided under the programme should be entirely utilised for financing the subsidy component of the schemes eligible for assistance under the programme. But it was soon realised that investment on infrastructure will be necessary if the identified beneficiaries are to derive maximum benefit from the assistance provided to them under this programme. It was, therefore decided to utilise 10 per cent of the outlay provided under the programme for the development of infrastructure.

It has been estimated that on an average, an investment of Rs 5,000 would enable a rural family to get fully employed. As the major part of the funds provided under IRD programme are to be used for financing subsidy component of the schemes, on the basis of the existing pattern of subsidy under the programme, a direct investment of Rs 1,500 from IRD funds should enable a family to go above the poverty line. This, however, assumes that necessary loan support of twice or thrice this amount is provided by the institutional sector. On the basis of these estimates, the number of families that can be raised above the poverty line during one year will be about 300 in blocks for which the outlay is Rs 5 lakhs and 600 in blocks where the outlay is Rs 10 lakhs per block. The programme is intrinsically linked with the availability of bank credit and the banks will have to assume a major responsibility if the programme is to make a real success.

Applied Nutrition Programme

The Applied Nutrition Programme, a centrally sponsored scheme in collaboration with UNICEF is intended to educate the rural people on improved nutrition. The programme specially aims at securing the needed nutritional supplements for children below five years and expectant and nursing mothers. The Gram Panchayats, Yuvak and Mahila Mandals are associated with the production of nutritional foods.

The Programme had covered 1,766 blocks up to 1978-79. Of this, 23 blocks were chosen for more intensive work. During the Fifth Plan, 585 new blocks were covered with a revised outlay of Rs 12.99 crores.

RURAL EMPLOYMENT

Although, most of the central ministries/departments handle numerous programmes generating employment in the rural areas, the Ministry of Rural Reconstruction plays a major role in regard to rural employment. It implements employment generating schemes, like the integrated rural development programme, food for work programme, training of rural youth for self-employment etc.

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

Rural Industries

The Rural Industries, Services and Business Component, was built into IRD programme in 1979 with the objective of maximising the employment opportunities in the secondary and tertiary sectors. The planning strategy for the rural industries sector aims at providing reasonable income to the rural artisans and substantial increase in employment opportunities. This calls for an integration of the beneficiary-oriented schemes with the overall plan, which is to be drawn up after taking the resource endowments of the areas into account.

Training for Self-employment

The National Scheme of Training of Rural Youth for Self-employment was initiated from August 1979, with the principal objective of removing unemployment among youth. The main thrust of the scheme is on equipping rural youth with necessary skills and technology to enable them to seek self-employment. It is proposed to train about two lakh rural youth every year in various skills, both in IRD and non-IRD areas. Apart from institutional training, training is also to be given through local servicing and industrial units, master craftsmen, artisans and skilled workers. The scheme provides for training stipends (Rs 100 p.m. per trainee), training expenses (Rs 50 p.m. per trainee given to training institution), subsidies on IRD pattern and assistance for strengthening of existing infrastructure. For 1979-80, an amount of Rs 3.50 crores was provided.

Khadi and Village Industries

Khadi and village industries generally process local raw-materials and mainly cater to the requirements of the local population. Some of the important industries under this category are khadi (cotton, woollen and silk), the processing of cereals and pulses, vilage oil, cane-gur and khandsari, palm-gur, non-edible oils and soap, bee-keeping, hand-made paper, village pottery, gobar gas, carpentry and blacksmithy. The Khadi and Village Industries Commission (KVIC), set up in April 1957, is responsible for the development of 24 village industries including khadi. Its programmes are implemented through (i) State Khadi and Village Industries Boards set up under the respective State Acts, (ii) institutions registered under the Societies Registration Act, 1860 (iii) the cooperatives registered under State Cooperative Acts, and (iv) individual artisans. The Commission provides financial and other assistance to the various agencies implementing its programmes. By the end of 1978-79, there were 24 statutory boards, 694 registered institutions, and 27,871 cooperatives engaged in implementing its programmes.

The main emphasis is on making the pattern of production more labour-intensive and on regulating technological choice so that the rate of growth of employment is maintained at a satisfactory level. Top priority is given to the speedy development of a wide network of small and cottage industries which are to produce consumer items like matches, soap and footwear. It also envisages development of tertiary sector units.

Performance

The performance of the Khadi and Village Industries Commission in terms of outlay, production and employment during 1978-79 showed an improvement over 1977-78 as shown in table 15.2.

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

TABLE 15.2
PERFORMANCE OF KVIC

Year	Outlay (Rs crores)	Production (Rs crores)	Employment (in lakhs)
1977-78	44·65	250·82	23·14
1978-79	66·73	319·37	24·97

Food for Work Programme

The Food for Work Programme, started in April 1977, aims to utilize the country's available food stocks for insulating the economically handicapped sections of the rural community from hunger. At the same time, it aims at strengthening the rural infrastructure in order to speed up the conversion of our natural endowments into durable assets meaningful to our people. The programme has become an important instrument of rural development and of achieving both social and ecological security. In the wake of the recent drought situation, it has assumed greater importance as an instant solution to the problem of destitution and abrupt unemployment occasioned by failing crops.

Started originally as a non-Plan scheme, the scope of the programme was enlarged to include on-going Plan and non-Plan works. All types of works like construction of major, medium and minor irrigation projects, flood protection; drainage and anti-water logging works; forestry works; rural roads; *panchayat ghar;* community centres; drinking water supply scheme; deepening and rejuvenating of tanks and reservoirs, etc., are now permitted to be taken up under the programme.

As the scheme stands now, any state government can take advantage of it provided it can show additionality of expenditure over and above their budget allocations and that durable community assets can be created. Foodgrains are made available to the state governments free of cost and they are to be utilised by them for the payment of part or whole of the wages of the labour engaged in the execution of specified works taken up under the scheme. The work projects under the scheme can be implemented throughout the year and the state governments have the discretion to get the work done through voluntary organisations of repute. Panchayati raj institutions like *Gram Panchayats, Panchayat Samitis* and *Zila Parishads* can also participate in the scheme. Foodgrains up to 1.00 crore tonnes can be alloted to them by the District Magistrates at their own levels for the excution of works.

Under the original scheme, only wheat was being supplied to the state governments but from 1979 onwards, they have been given the choice to draw the entire quantity of foodgrains released to them either in rice or wheat or both as they wish. State governments can also utilise coarse grains for distribution under the programme if the same have been procured by them as a price support measure and are available in stock with them.

The Programme has grown in size year after year. For 1978-79, a total quantity of about 14 lakh metric tonnes of foodgrains was released. Out of this the total quantity utilised was about 12.5 lakh metric tonnes. The employment generated was of the order of nearly 37 crore mandays. The cost of the total foodgrains utilised during the year came to more than Rs 175 crores. Coupled with the cash component provided by the state government, and contributions made by the people, the total investment made under the Programme exceeded Rs 300 crores.

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

During 1979-80 a quantity of 15 lakh tonnes of foodgrains was made available for utilization under the normal food for work programme. This was allocated to state governments in full in the beginning of the year itself. There being an unprecedented drought in the country during the year, an additional quantity of 10 lakh tonnes of foodgrains had to be provided for special food for work programme to meet the drought situation. The foodgrains made available under the food for work programme (normal as well as special) during 1979-80 would generate total additional employment to the tune of nearly 100 crore mandays, besides creating large number of durable community assets, which will go a long way to strengthen the infrastructure for rural development.

Benefits

The scheme has the potential of becoming a major instrument of rural development and employment. The payment of wages in foodgrains provide price stabilisation effect and relief to the poorer section of the people. The scheme offers employment to the seasonal unemployed agricultural labour force, helps in securing minimum wages and thereby improve their incomes and nutritional levels. The works executed under the programme help in creating durable community assets through utilisation of surplus foodgrains available with the government. The programme has also proved helpful in reducing the exodus of landless labourers from rural areas to cities in search of livelihood, specially during periods of drought etc.

Integration of Women in Rural Reconstruction

As women form a large segment of the work force in rural areas and the status of rural families equally depends on the economic role played by them, a cell has been created in the integrated rural development division of the ministry to strive for greater involvement of women in the on-going programmes of rural reconstruction. The cell examines various programmes and scheme to identify the areas which concern rural women and helps in the preparation of appropriate guidelines for the state departments and union territories for implementation of the programme components related to rural women.

It also maintains liaison with other ministries, departments and organisation concerned with the improvement of the status of women both at the centre and state level. The cell convenes regional meetings of the officers, at the central and state level, dealing with integrated rural development programmes to identify the action required for better involvement of women in the rural reconstruction programmes.

Involvement of Industrial and Mercantile Houses

Industrial and mercantile houses are being involved in various programmes of rural development. Quite a few of these houses are already engaged in certain developmental activities in the rural areas, but these are largely in the nature of welfare activities. In some cases, however, useful rural development programmes have also been taken up by them. The present endeavour of the department is that instead of taking up isolated activities, commercial houses can be encouraged and guided to take up programmes which will be helpful in transferring the modern agricultural technology to small and marginal farmers, and improve the lot of the rural artisans and landless agricultural labourers. These may ultimately result in the overall development of the rural areas, particularly of the weaker sections.

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

In order to encourage industrial and mercantile houses to take up rural development work a new provision has been made in section 35 CC of the Income Tax Act according to which the expenditure incurred on an approved programme of rural development would be deductable in the process of computing the taxable income of a company or a cooperative society. With a view to giving further impetus to the programme of rural development, section 35 CCA has been inserted in the Income Tax Act which provides for the deduction in the computation of the taxable profits, of expenditure incurred by a tax payer engaged in a business or profession by way of payment of any sum to an association or institution having the object of undertaking any programme of rural development to be used in the purpose of carrying out such programme.

Agricultural Marketing

The scheme to provide central assistance as margin money for development of selected regulated markets was started in the Fourth Plan. In the Fifth Plan, emphasis was laid on the development of regulated markets situated in command areas and those catering to important commercial crops like cotton, jute, tobacco, groundnut, coconut, cashewnut, potato and onions. The outlay for the scheme in the Fifth Plan was Rs 700.00 lakhs. So far central assistance of Rs 673.50 lakhs has been provided for the development of 230 markets including 42 regulated markets located in tribal, hilly and drought prone areas.

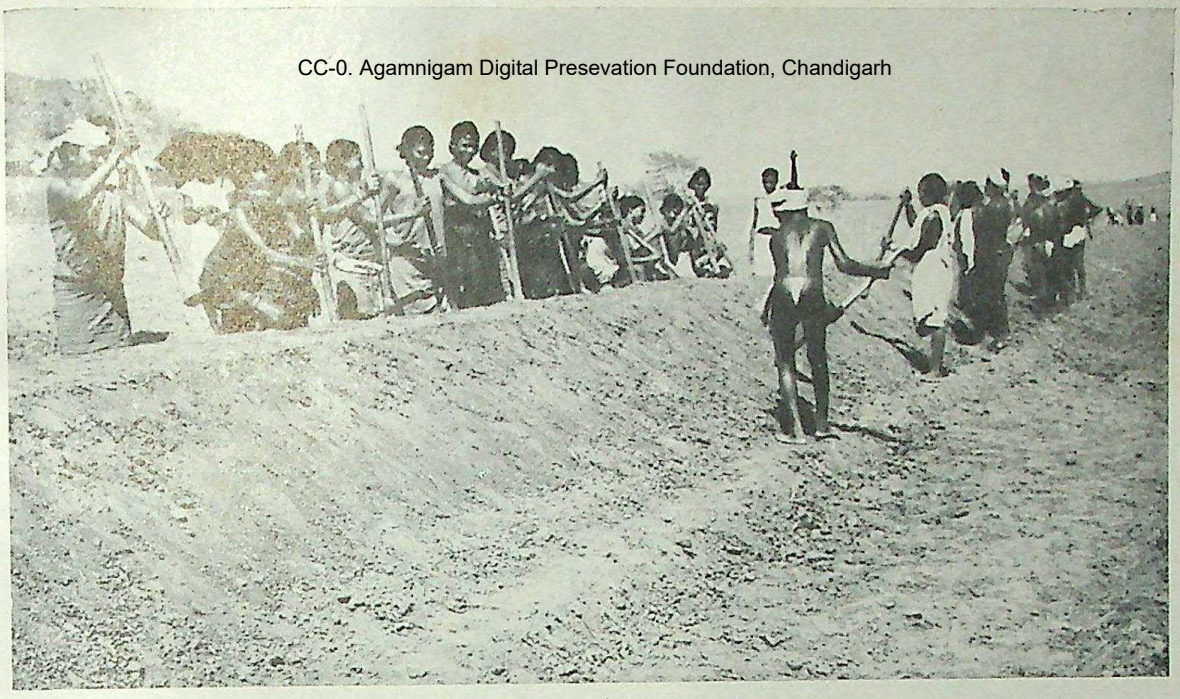
A new scheme to provide grant-in-aid of Rs 1.5 lakh per market for the development of small rural markets (huts or shanties) was taken up in 1977-78. So far, assistance amounting to Rs. 549.90 lakhs has been provided under this scheme to 414 markets.

To ensure that growers get prices according to the quality of their produce, grading was introduced for 113 agricultural commodities under the Agricultural Produce (Grading and Marketing) Act. To keep up the standard of grading under 'Agmark' system five more laboratories for scientific testing are being set up in addition to sixteen existing ones. With the UNDP assistance, a Marketing Planning and Design Centre has been started at Faridabad and a training centre and workshop at Nagpur. The Centre will study the packaging, grading and marketing of selected fruits and vegetables and also advise the authorities on the designing of fruit and vegetable markets.

PANCHAYATI RAJ

Panchayati Raj, introduced in 1959, is a three-tier structure of local self-government at the village, block and district levels. However, the states are free to make changes in the structure to suit local conditions. All Panchayati Raj bodies are organically linked up. Special representation on these bodies is given to interests like backward classes, women and co-operative societies. Elected directly by and from among villagers, the panchayats are responsible for agricultural production, rural industries, medical relief, maternity and child welfare, common grazing grounds, village roads, tanks and wells and maintenance of sanitation. In some places they also look after primary education, maintenance of village records and collection of land revenue.

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh



Gadava Tribes folk at work

Rural Reconstruction

"Food for Work" programme on the go—
Farmers constructing their village road

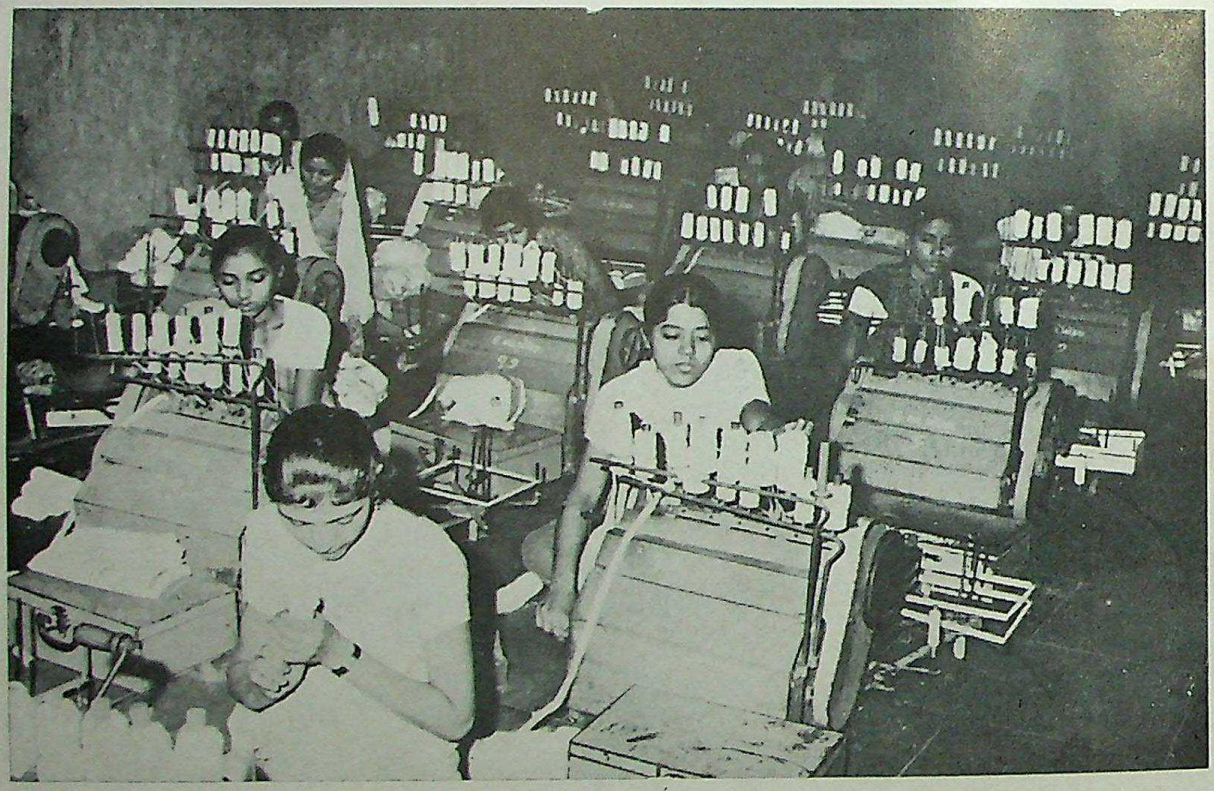
CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

Adult education—Learning late and at night, a regular feature in community project villages

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

Deft hands at carpet making in Uttar Pradesh

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh



Girls at work on Ambar Charkhas

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

Coverage

Panchayati Raj now covers all the states except Meghalaya, Nagaland and 23 out of 31 districts in Bihar. The institution of village panchayat exists in all the union territories except Lakshadweep and Mizoram.

There are at present 2,25,832 village panchayats covering a population of 44.13 crores. In addition, there are 4,414 Panchayat Samitis and 274 Zila Parishads.

Activities

The panchayat, the co-operative and the school are the basic institutions at the village level for carrying out the programme of rural reconstruction. The elected panchayat is in charge of all development programmes in the area. The cooperatives endeavours to supply cheap credit to the people. The village school, which is also a community centre, looks after educational, recreational and cultural needs of the people. Associate bodies, such as women and youth organisations, farmers' and artisans' associations, functioning in their respective spheres, are linked up with the panchayat in its development activities and are supported in turn by the panchayat in their work.

Finance

Panchayati Raj institutions have their won powers of taxation. They levy taxes on houses and certain types of lands, fairs and festivals and sale of goods and impose octroi duties. They also build up remunerative community assets.

The powers and responsibilities of Panchayati Raj institutions are derived not only from the respective state legislations, but also from the procedures—administrative and financial—laid down by state governments. Gujarat, Maharashtra and Tamil Nadu have invested these institutions with programme responsibilities over a wide range of activities.

Nyaya Panchayats

For providing a speedy and inexpensive system of justice to the villagers, Nyaya Panchayats or village courts are functioning is some of the states.

Ashok Mehta Committee on Panchayati Raj Institutions

With a view to reviewing the functioning of Panchayati Raj institutions in the country and suggesting necessary structural changes in these institutions to make them an effective instrument of rural development, a committee was set up in 1977 under the chairmanship of Shri Ashok Mehta. This Committee has suggested certain changes in the structure of Panchayati Raj institutions. The recommendations of the Committee are under the consideration of the Government.

TRAINING

In order to develop a proper understanding of the basic objectives underlying the rural development and Panchayati Raj programmes, suitable training is given to concerned officials and non-officials at compositive training centres functioning under the administrative control of the various state governments.

The National Institute of Rural Development at Hyderabad is the only Institute in the country which concentrates on all aspects of rural development and has a multi-disciplinary approach in all its research and training programmes. It was set up in 1958 at Mussoorie and was shifted to Hyderabad in 1964. It became on autonomous body in 1965. The Institute, besides fulfilling the training needs of

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

the key personnel involved in rural development also conducts research studies leading to rural transformation.

The Institute aims at translating into action the strategies and programmes of rural development in the national socio-economic growth process, concentrating chiefly on social and economic well being; improvement of Panchayati Raj; monitoring of development projects and their co-ordinated approach with other agencies of human resource development; evolution of an egalitarian agro-industrial society and dissemination of knowledge and information. Within each area research studies, training programmes, seminars and workshops are organised and consultancy assignments undertaken.

The services of the Institute are available to central and state governments, public and private sector undertakings, and international agencies which have concern for rural development. The Institute is the main IRD centre for the Centre for Integrated Rural Development for Asia and Pacific (CIRDAP) with headquarters at Comilla, Bangladesh.

16 CIVIL SUPPLIES AND CO-OPERATION

CC-0. Agamnigam Digital Preservation Foundation, Chandigarh

CIVIL SUPPLIES

The Department of Civil Supplies and Co-operation was created in October 1974 as a part of the reconstituted Ministry of Industry and Civil Supplies. It took on the work relating to co-operation (excluding co-operative agricultural credit) in the former Department of Community Development and Co-operation and that pertaining to civil supplies in the Ministry of Commerce. It was converted into a separate ministry in August 1976 but again changed to a department in the reconstituted Ministry of Commerce, Civil Supplies and Co-operation in February 1978. In September 1979, the Department of Civil Supplies and Co-operation was redesignated as Department of Civil Supplies under the Ministry of Commerce and Civil Supplies and its subjects relating to co-operation except consumer co-operatives were transferred to the Department of Agriculture and Co-operation.

The Department of Civil Supplies deals with matters relating to internal trade and trade marks. Internal trade includes monitoring of prices, availability of essential commodities (including Administration of Prevention of Black Marketing and Maintenance of Supplies of Essential Commodities Act, 1980), public distribution system, consumer protection, consumer co-operatives, control of future trading and integrated management of the supplies, prices and distribution of vanaspati, oilseeds, vegetable oils, cakes and fats. Works pertaining to trade marks includes, besides registration of trade marks, matters relating to weights and measures and the Indian Standards Institution.

Categories of Essential Items

Specific problem areas with reference to basic needs of the weaker and vulnerable sections of the population have been identified and measures taken for priority distribution of seventeen categories of essential items. These have been further divided into three broad categories according to their importance. The first category comprises foodgrains, namely, wheat and rice (including coarse grains and pulses where necessary), sugar, standard cloth, vanaspati and edible oils, kerosene oil, soft coke and salt. In the second category are cement for housing and agricultural needs, cultural paper for students, diesel oil for agricultural needs, essential drugs, soap, including washing soap, matches and soda-ash. Baby food, tyres and tubes for cycles, scooters, buses and trucks and common footwear come under the third category. In addition, steps are taken to meet specific requirements of particular areas like salt in the eastern and north-eastern regions, soft coke in the northern and central regions, coarse grains and pulses for industrial and agricultural labour in several areas.

Approach

For meeting the problem of supply of some of these commodities, a two-fold strategy has been adopted : first, the 'commodity approach' which envisages the preparation of annual commodity budgets, in the widest sense aiming at balancing the supply and demand of these commodities; second, the 'area approach' which seeks to ensure that essential commodities reach the vulnerable areas like metropolitan and large urban areas, labour concentrations in mining, industrial and

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

plantation areas, district headquarters, hilly areas, rural areas in chronically scarcity affected or deficit districts and areas inhabited by vulnerable and poorer sections of the population.

Distribution of Essential Commodities

A scheme called the production-cum-distribution scheme for selected essential commodities, for putting the present distribution system on a sound footing with appropriate support for sustaining and increasing production of essential commodities, was launched throughout the country from 1 July 1979. This scheme lays emphasis on ensuring adequate production of essential commodities, active price support operations as a measure of increasing their production, adequate arrangements for procurement at support prices, storage, transport and distribution of selected essential commodities. Besides the traditional items like foodgrains, sugar, controlled cloth, kerosene and soft coke, manufactured items like toilet/washing soap, match boxes, tea, coffee and exercise note-books have been included for distribution through the fair price shops. The area coverage has also been enlarged, especially in the rural sector, so as to have one fair price shop for a population of two thousand and in remote, hilly and inaccessible areas one fair price shop for a population of even one thousand.

The production-cum-distribution scheme envisages national level, state level, district level and taluka level consumer advisory committees in order to supervise the functioning of the fair price shops and to ensure better services to consumers and elimination of malpractices indulged in by the owners of fair price shops. In November 1979, an Advisory Council was formed at national level to review the implementation of the scheme.

Co-operatives and Distribution of Consumer Articles

The consumer co-operatives, which have been assigned a key role in the public distribution system, continued to serve the consumers through their branches and fair price shops, which were allotted to co-operatives in preference to the private trade. The co-operative distribution system of consumer articles comprises consumer co-operatives in urban areas and agricultural service and marketing societies in rural areas. In the consumer co-operative structure, a four-tier system is in operation, comprising 16,348 primary societies at the base level, 481 central/wholesale societies, with 3,690 branches at district level, 14 state consumer co-operative federations at the state level, and the National Co-operative Consumers Federation (NCCF) at the national level. Out of 3,690 branches run by the district level wholesale/central stores, 200 are department stores, providing opportunity of complete shopping under one roof. In addition to this structure, there are over 5,000 co-operative societies which are functioning amongst industrial workers, railway employees, post and telegraph employees, and so on. In the rural areas, about 1,900 primary marketing societies and over 37,000 village/service societies and other co-operatives are engaged in distribution of consumer articles.

These co-operatives are engaged in distribution of various essential articles, both controlled and non-controlled. In controlled goods, co-operatives deal with all the items which are earmarked for the public distribution system. Other essential commodities handled by these co-operatives are groceries, cosmetics and toiletries, household goods, stationery goods, textiles, aluminium and stainless steel utensils, drugs and medicines, baby food, dry battery cells and tyres and tubes.

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

Regular supplies of these items have been ensured by earmarking a percentage of the total production of manufactured articles for distribution through co-operatives. Foodgrains are generally procured from the Food Corporation of India or direct from the open market at the time of harvest by their own agencies. In the rural areas, supply of agricultural requisites like implements, fertilizers and pesticides are also undertaken by the co-operatives. During 1978-79, the value of the retail trade handled by the consumer co-operatives in urban areas was about Rs 700 crores as against Rs 650 crores during 1977-78, registering about a 10 per cent increase. In the rural areas, primary marketing societies and village societies handled consumer articles valued at about Rs 555 crore during 1977-78 registering an increase of about 13 per cent from the achievement during 1975-76, which was to the tune of Rs 490 crore.

Distribution of Controlled Cloth through Co-operatives

The National Co-operative Consumers Federation is the co-ordinating agency at the national level for distribution of controlled cloth throughout the country. At the state level, generally the State Consumer Co-operative Federations have been appointed as co-ordinating agencies, but in certain states, the Tribal Development Corporation as well as Civil Supplies Corporation are also functioning as state level marketing agencies. In most of the union territories, the distribution of the controlled cloth is undertaken by NCCF direct through wholesale stores nominated by the concerned authorities. During 1978-79 (July 1978 to June 1979), the Textile Commissioner released 2,51,796 bales of controlled cloth against the national quota of 2,66,700 bales. Controlled cloth is distributed through 57,140 retail outlets in the country (as on 30 January 1979), out of which 44,363, *i.e.*, more than 70 per cent were located in rural areas serving generally the weaker sections of the population. In urban areas also, many outlets are located in economically backward pockets.

NCCF

The National Co-operative Consumers Federation is the apex national level consumers co-operative institution in the country. It is engaged in bulk procurement of essential commodities and their supply to affiliated organisations throughout the country. It has also set up a Consultancy and Promotional Cell for giving technical and managerial consultancy services to the consumer co-operative movement. It has also a very important role to play in the public distribution system for maintaining supply of essential commodities. The Federation is dealing both in controlled and non-controlled textiles, general merchandise such as paper, soda ash, razor blades, soap, detergents, and a number of grocery items like pulses, tea, rice and salt. The Federation has also been engaged in bulk procurement and buffer stocking of pulses for effecting a salutary impact on the pulses market in the country. During 1978-79, the NCCF procured 36,953 metric tons of pulses from the producers to stabilise and control its prices. Besides, it had also taken up distribution of a few selected commodities which are particularly required during the festival season.

The Federation has entered into certain arrangements with manufacturers for production of blades, cheap varieties of textiles among other items under their own brand name. It is also running certain consumer industries such as production of exercise books and processed spices. At the initial stage, the NCCF was much dependent on

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

sheltered business under arrangement by the Government of India. Gradually it started diversifying its activities and its annual sales turn over during 1978-79 was Rs 102.21 crore as against Rs 91.16 crore and Rs 63.81 crore during 1977-78 and 1976-77, respectively.

Trend in Wholesale Prices

After about two years of relative general price stability, inflationary pressures started building up in the national economy with the presentation of the Budget for 1979-80. Between April to November 1979, the overall index moved up by 12.4 per cent with an average monthly rise of 1.8 per cent. During the first eight months of 1979-80, the average overall price index moved up by 13.4 per cent in comparison to a decline of 0.6 per cent in the corresponding period in 1978-79 and an increase of 7.0 per cent in the same period in 1977-78. In November 1979, the overall index was 17.2 per cent higher over the year indicating, on a point to point comparison, a monthly rate of inflation of 2.15 per cent.

While between the terminal week of August 1979 and terminal week of November 1979, the overall index moved both ways within narrow limits and there was general stability in the index inasmuch as the overall index remained more or less at the same level in the weeks ending 25 August 1979 and 24 November 1979. However, in the first three weeks of December 1979, there has been contra-seasonal upward movement in the overall index.

Trend in Consumer Prices

The trend in the wholesale price index has been reflected in the consumer price index for industrial workers. In October 1979, the consumer price index for industrial workers stood at 365 in comparison to 332 in March 1979 indicating an increase of 10 per cent in the first seven months of 1979-80. Over the year, this index was higher by 7.4 per cent in October 1979. Similarly, the consumer price index for agricultural labourers moved up from 310 in March 1979 to 360 in October 1979, showing an increase of 16.1 per cent. This index was higher by 10.8 per cent in October 1979 over the index for the same month last year.

A number of factors were responsible for an inflationary situation in the economy during 1979-80, the more important among them being : increase in excise duty for various commodities and imposition of import duty on edible oils, unprecedented drought which adversely affected the production of various agricultural commodities, increase in import prices of commodities such as crude petroleum, petroleum products, edible oils, cement and non-ferrous metals, increase in administered prices of commodities like coal, steel, imported edible oil distributed through public distribution system, cement and petroleum products, transport bottlenecks particularly in respect of movement of goods by rail and power cuts. In addition, conditions of aggregate demand in economy and emergence of supply constraints complicated the inflationary situations.

Production of Essential Commodities

In 1978-79, the total foodgrains production amounted to 13.1 crore tonnes as compared to 12.6 crore tonnes in 1977-78 and 11.1 crore tonnes in 1976-77. The increase was largely on account of rise in the production of cereals though moderate increase in the production of pulses was also achieved. On account of unprecedented drought during 1979-80, some shortfall in production of 1979 *kharif* crops was

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

expected. Timely rains, however, improved the prospects for 1980 *rabi* crop. An important feature of the country's food economy is huge stocks of cereals with the government.

The trend in the production of mass consumption manufactured products has been a mixed one during April-September 1979 as compared to the corresponding period in 1978. The production of a number of manufactured products has gone up which includes baby food, wheat flour, biscuits, leather footwear (western type), cultural paper, rubber footwear, synthetic detergents, electric bulbs, hurricane lanterns, dry cells, bicycles and tooth powder. But there was a shortfall in the production of a number of other manufactured products of mass consumption during the same period which includes leather footwear (Indian type), bicycle tyres, soaps, matches, cement, pencils and tooth paste.

Availability

Constraints on supply were witnessed in respect of a few commodities during 1979-80. Persistent reports of shortages were received from various parts of the country regarding cement, kerosene, soft coke and soda ash. Periodic shortages of salt were felt in some of the north-eastern states. Shortages of sugar were reported from several parts of the country during the first few months of 1980. In addition, there were reports of localised shortages of temporary nature of a few commodities like vanaspati, baby food, exercise books, controlled cloth, cycle tyres and tubes, onions and printing paper. The availability of cereals was fairly easy throghout the country, though there were reports of short supply from time to time in the north-eastern states, mainly on account of transport bottlenecks.

Steps Taken to Check Rise in Prices

Government has taken a number of measures to check inflation and improve the availability of essential commodities and items of mass consumption from time to time during 1979-80. Some of the measures taken are indicated below :

(i) Severe economy measures on administrative expenditure have been imposed in all the ministries.

(ii) Reserve Bank of India has taken a number of selected credit control measures. Credit to commercial sector has been tightened in general and credit against sensitive commodities like edible oils, sugar and pulses has been limited.

(iii) All out efforts are being made to enhance the production of *rabi* crops and efforts are also afoot to increase the production of edible oils and pulses.

(iv) State governments have been informed that all their requirements for distribution of cereals through fair price shops will be met in full. Of late, there has been some increase in the off-take of cereals from fair price shops in the states.

(v) National Agricultural Co-operative Marketing Federation of India and National Co-operative Consumers Federation have enlarged their operations in the sale of pulses through State Civil Supplies Corporations and consumer co-operatives.

(vi) Dual price policy for sugar has been re-introduced.

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

(vii) NCCF has been continuing its operation of selling loose tea on fixed retail prices in various parts of the country. While supply of controlled cloth has been continued, a new scheme has been launched under which it has been made obligatory for manufacturers to stamp all-inclusive consumer prices on every metre of cheaper varieties of cotton/viscose cloth.

(viii) As a result of the various measures taken by the government, the availability of edible oils and vanaspati continued to be easy even during the periods of high demand like the festival seasons. Various steps taken by the government included :

(a) An annual edible oil plan was being prepared in advance of the Oil-Year beginning from November, in consultation with the various concerned interests. The plan identified the gap between the supply and demand for edible oils and accordingly, timely measures were taken to fill the gap by imports and through other appropriate means.

(b) In order to have a greater control over the import of edible oils and for regulating and monitoring their availability, the imports were canalised through the State Trading Corporation of India (STC) w.e.f. 2 December 1978. The STC thus supplied the imported edible oils to the various categories of consumers. These include the state governments for distribution through the public distribution system; vanaspati industry for manufacture of vanaspati; and also private trade and refiners for commercial sales.

(c) In order to relieve pressure on the indigenous edible oils meant for direct consumption, the central government has been providing imported edible oils to meet the major requirements of raw oils of the vanaspati industry. The quantum of imported edible oils for use in vanaspati has been raised to as high as 95 per cent of the total oil input with a view to conserving, as far as feasible, the indigenous edible oils for direct consumption.

(d) With a view to providing the desired incentive for indigenous production of edible oils, duty-free imports were stopped since March 1979.

(e) Exports of edible oils and oil seeds are not allowed except marginally and in certain special cases.

(f) With a view to ensuring free availability of the oils in all parts of the country, there is no restriction, formal or informal, on the movement of edible oils in the country.

(g) Stock limits of edible oils/oilseeds have been fixed under Pulses, Edible Oilseeds and Edible Oil (Storage Control) Order to cover the stocks with producers, wholesalers and retailers.

(h) In order to augment the availability of edible oils for direct consumption, certain popular imported oils like rapeseed oil, RBD palm oil and palmolein are sup-

CC-0. Agamnigam Digital Preservation Foundation, Chandigarh

plied by the STC to the state governments for distribution through the licensed fair price shops at fixed prices.

(i) There are periodical reviews on the import and distribution of edible oils by the STC, keeping in view the demand, indigenous availability and the comparative situation of the prices.

(ix) With a view to augmenting domestic supply, imports of essential commodities like cement, soda ash and steel were arranged and pulses were allowed to be imported under OGL. The exports of commodities like fresh vegetables, HPS groundnuts and onions are being regulated and a ban has been imposed on the export of pulses and edible oils to protect the interests of domestic consumers.

(x) The existing public distribution system was enlarged in July 1979 with a view to covering more areas, population and commodities. The Prevention of Black Marketing and Maintenance of Supply of Essential Commodities Ordinance, 1979 was issued which became effective from 15 October 1979.

(xi) The central government has asked the state governments to enforce the provisions of the Essential Commodities Act, Storage Control Order, Price Display Order and similar other measures. Government by an order dated 21 November 1979 imposed stock limits on wholesalers and retailers in regard to pulses and edible oils. This order is still in force though some amendments have been made to it from time to time.

Consumer Movement

Several consumer guidance associations have been activised and are doing useful work, not only in supervising the distribution of essential commodities but also for checking malpractices in trade, especially adulteration and use of inaccurate weights and measures. In the context of rising prices, the consumer movement is gaining momentum. The emphasis is on streamlining the distribution system, imparting quality to mass consumption goods, creating awareness of quality and price amongst women, and recognition of the rights of the consumers. Already a number of laws and regulations are in force offering protection to consumers from unfair practices. In February 1979, various consumer organisations formed at New Delhi the Indian Federation of Consumer Organisations for co-ordinating their activities to educate consumers and organise them to resist unfair practices and to build up an independent, non-political consumer movement in India. The Federation gathers and disseminates information on consumer laws and practices and provides a forum for discussion on consumer problems, organisation of national and international exhibitions and seminars on matters relating to consumers. The central and the state governments give suitable financial assistance to consumer societies for promoting consumer education, research on consumer problems, for testing the quality of various products, maintenance of standards for manufactured products, organising seminars on consumer needs, workshops on availability of mass consumption items and publication of literature on consumer protection.

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

Legal Measures

In the complex economic system prevailing today, legislative protection is necessary to safeguard the interests of the consumers. The country has taken various measures to achieve this objective. (Steps taken to prevent food adulteration, etc., have been discussed in the chapter on Health).

The main legislation governing the production, procurement, price control and distribution of essential commodities is the Essential Commodities Act, 1955. This Act was amended in 1976 to ensure quicker and more effective action against the anti-social activities of profiteers, blackmarketeers and hoarders.

To check the increasing price trend and artificial scarcity of commodities created by unscrupulous traders, the President promulgated on 5 October 1979 an Ordinance, namely, the Prevention of Blackmarketing and Maintenance of Supplies of Essential Commodities Ordinance, 1979, providing for preventive detention of persons who indulge in hoarding, black-marketing and other unethical trade practices in regard to essential commodities and items of mass consumption. The government has now decided to replace this Ordinance by an Act of Parliament.

Standards of Weights and Measures

The Directorate of Weights and Measures in the Department of Civil Supplies is responsible for establishing standards of weights and measures, based on the International System of Units (SI). Since its inception, it has also been functioning as a nodal point for all activities relating to metric change and regulatory control on weights and measures. The enforcement of the standards, however, is done by the states/union territories in accordance with their own laws on the subject. With a view to bringing uniformity in enforcement, the Constitution (Forty-second Amendment) Act, 1976, has placed in the Concurrent List the subject of enforcement of weights and measures. As a result of this, Parliament also can make laws in this regard.

In order to introduce the International System of Units (SI)—the modernised and developed form of the metric system—and to bring our laws in line with international recommendations adopted by the International Organisation of Legal Metrology (OIML), the Standards of Weights and Measures Act, 1976 (60 of 1976) was enacted. It is now necessary to revise the enforcement laws in the light of this Act. Steps are being taken for this purpose.

The provisions of the 1976 Act and the rules framed under them for the regulation of packaged commodities were brought into force from 26 September 1977. They stipulate that every package intended for retail sale must bear a declaration of the net contents, the month and the year of manufacture or packing, the name and address of the manufacturer/packer, and the price. Provisions have also been made for the accuracy of the net content of the package. They have proved very effective in establishing fair trade and price discipline in respect of commodities sold in packaged form.

The Indian Institute of Legal Metrology at Ranchi imparts training to the personnel of the Weights and Measures Organisations of the states. Foreign students also receive training in legal metrology at this Institute. It is being expanded and modernised with the assistance of the Federal Republic of Germany. Two Regional Reference Standards Laboratories were established at Ahmedabad and Bhubaneswar under the Fifth Five Year Plan. These laboratories are intended

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

to provide metrological assistance to the state organisations and the industrial units of the region.

The National Physical Laboratory, New Delhi, is responsible for the realisation, establishment, custody, maintenance and updating of national standards of weights and measures. The Government of India Mint, Bombay, has been made responsible for the manufacture of reference, secondary and working standards. The Mint also caters to the needs for standards of several other countries in the region.

Trade Marks

The Trade and Merchandise Marks Act, 1958 provides for the registration and better protection of trade marks and the prevention of the use of fraudulent marks on merchandise. The Trade Marks Registry is the statutory organisation set up for the administration of the Trade and Merchandise Marks Act, 1958. It is under the control of the Controller General of Patents, Designs and Trade Marks, who is the Registrar of Trade Marks for the purpose of the said Act. The head office of the Trade Marks Registry is at Bombay and it has three branch offices at Calcutta, Madras and New Delhi. Each office of the Registry has a defined territorial jurisdiction. The Register of Trade Marks is kept at the head office at Bombay and a copy thereof at each branch office. During the calendar year 1979, 3,354 trade marks were registered, 10,982 registered trade marks renewed and 124 registered users were recorded.

Under the Foreign Exchange Regulation Act, 1973, foreign companies or Indian companies with more than 40 per cent non-resident interest are not allowed to permit any trade mark to be used by any person or company for any direct or indirect consideration, without the prior permission of the Reserve Bank of India. Permission granted to use any such trade mark before the Act came into force has also to be renewed.

Forward Markets Commission

The Forward Markets Commission regulates forward contracts and keeps a watch on the price trends of a number of commodities including certain essential commodities. The Commission makes special efforts to acquaint the state police authorities with the nature, *modus operandi* and other technicalities of the offence under the Forward Contracts (Regulation) Act, 1952, the implementation of which is overseen by the Commission.

During 1979, the Commission continued the regulation of trading in four commodities, *viz.*, jute sacking, pepper, turmeric and *gur*, in respect of which forward trading had been permitted through recognised associations. The centres in which trading was permitted were Calcutta for jute sacking; Cochin and Bombay for pepper; Sangli for turmeric; and Hapur, Meerut, Muzaffarnagar, Kanpur, Agra, Gwalior, Amritsar, Ludhiana, Kolhapur, Dhuri, Bhatinda, Hansi and Bhiwani for *gur*. Transferable and non-transferable specific delivery contracts were permitted in raw jute and jute goods. Non-transferable specific delivery contracts were also permitted in cotton of different descriptions under the auspices of recognised associations at Bombay, Bhatinda, Ahmedabad, Surat, Broach, Surendranagar, Ujjain and Guntur.

The Government of India had set up on 27 March 1979 a Committee under the Chairmanship of Dr. A. M. Khusro, Vice-Chancellor, Aligarh Muslim University, to look into the operations of forward markets and the role of the Forward Markets Commission in effectively

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

regulating forward trading in various commodities. The Committee is expected to submit its report to the Government of India by mid-1980.

CO-OPERATION

The co-operative idea took a concrete shape in India for the first time in 1904, when the Co-operative Credit Societies Act—a measure designed to combat rural indebtedness and to provide for registration of credit societies—was passed. Later, in 1912, the Co-operative Societies Act also provided for registration of non-credit societies as well as federations of co-operatives. Since then, the co-operative movement has made progress, specially in the fields of agricultural credit, marketing and processing of agricultural produce, supply of farm inputs and distribution of consumer goods. By the end of June 1972, there were 3.2 lakh co-operatives in the country, of which about 66 per cent were operating in the rural areas, largely engaged in serving the farmers, landless labourers and other sections of the rural population.

Growth of Co-operatives

The salient features and operational dimensions of the cooperative movement in India for selected years between 1960-61 and 1976-77 are given in table 16.1.

TABLE 16.1 GROWTH OF CO-OPERATIVES

	1960-61	1970-71	1973-74	1974-75	1975-76	1976-77
No. of societies (lakhs)	3·3	3·2	3·3	3·3	3·1	3·2
Membership of primary societies (lakhs)	342	591	692	695	848	896
Share capital (Rs crores)	222	851	1,226	1,529	1,529	1,700
Working capital (Rs crores)	1,312	6,810	9,648	11,278	12,432	14,585

A study of the data in table 16.1 shows that between 1960-61 and 1976-77—a period of 16 years—the membership of primary societies increased by more than two and a half times, the share capital of all types of co-operatives increased by more than seven times and the working capital by more than eleven times.

Primary Agricultural Credit Societies

By far, the largest number of societies were in the agricultural credit sector. At the end of June 1977, there were 1.23 lakh primary agricultural credit societies covering 96.3 per cent of the rural areas. The membership of these societies rose to 448.32 lakhs as on 30 June 1977. Universal membership has now been accepted as the policy so far as the primary agricultural societies are concerned, so that the people belonging to the weaker sections could become members of the co-operatives and avail of their services. The societies had a share capital amounting to Rs 377.3 crores in June 1977 and short-term agricultural lendings amounting to Rs 1,180 crores during the year 1976-77.

Marketing and Processing Co-operatives

The co-operative marketing structure consists of about 3,370 primary co-operative marketing societies covering all important agricultural markets in the country—369 district/regional marketing societies, including 207 sugarcane supply marketing societies and cane unions, 27 state level co-operative marketing federations and one National Agricultural Co-operative Marketing Federation. The total value of agricultural produce handled by marketing co-operatives increased to over Rs 580 crores in 1968-69 and further to about Rs 1,600

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

crores in 1978-79. The value of foodgrains handled by marketing co-operatives increased from about Rs 220 crores in 1968-69 to about Rs 384 crores in 1977-78. During 1978-79, the National Agricultural Co-operative Marketing Federation's turnover stood at over Rs 150 crores, as against Rs 30.53 crores in 1976-77. This included exports amounting to Rs 68.75 crores.

The structure of processing units established in the co-operative sector conforms to two distinct patterns, namely, (a) units established by independent processing societies, and (b) units established as adjuncts to co-operative marketing societies. Under the first category fall the larger units, such as, co-operative sugar factories, spinning mills and solvent extraction plants. Medium and small units, such as, rice mills, oil mills, cotton ginning and pressing units, jute baling units, mostly fall under the second category. Of the 2,340 processing units organised at the end of March 1979 in the co-operative sector, 1,862 units were installed of which 343 units were large and medium sized industry like sugar mills, spinning mills, solvent extraction plants, etc. Over 1,519 units were established as adjuncts to marketing societies. 167 co-operative sugar factories have formed themselves into 8 State Federations and a National Federation. During 1978-79 sugar season, 137 co-operative sugar factories were in production. They produced 30.53 lakh tonnes of sugar accounting for nearly 52.1 per cent of the country's total production of sugar. At the national level, the National Federation of Co-operative Sugar Factories renders advice and maintains a technical cell. It has helped in organising the National Heavy Engineering Co-operative Ltd. for manufacturing machinery in the co-operative sector at Pune, Maharashtra. The NHEC has recently decided to diversify its activities for manufacturing of machinery required by oil, cement and paper industries. It has already acquired site near Pune and orders for the plant and machinery have been placed for implementation of its first phase. The NHEC has enrolled 79 members including 69 co-operative sugar factories and has collected a share capital of Rs 95 lakhs. In the field of cotton ginning and pressing, co-operatives handled nearly 20 per cent of the total production in the country.

STORAGE

The National Co-operative Development Corporation is responsible for planning, promoting and financing the programme of augmenting storage capacity of co-operatives at various levels. Storage capacity of over 45 lakh tonnes had already been constructed in the co-operative sector by the end of June 1979, as against a capacity of 8 lakh tonnes in 1960-61. By the end of June 1979, as many as 21,125 rural godowns and 5,099 marketing godowns had been constructed. 155 co-operative cold storage units with a total capacity of 2.83 lakhs tonnes were also installed by the end of 1977-78. One of the major developments in the co-operative storage is that the NCDC has secured a line of credit from the International Development Association as also the European Economic Community, for implementation of co-operative storage projects in the states of Haryana, Uttar Pradesh, Orissa, Madhya Pradesh and Rajasthan. These two storage projects, when completed by 1984, will add 18.8 lakh tonnes capacity in the co-operative sector.

INDUSTRIAL CO-OPERATIVES

Co-operatives occupy an important place in the field of village and small industries and handloom weaving. As on 30 June 1977, there were 45,257 industrial co-operatives with a membership of 24.09

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

lakhs. During 1976-77, the production and sales of these societies were of the order of Rs 152.05 crores and Rs 174.67 crores, respectively.

The National Federation of Industrial Co-operatives, which was set up with a view to assist in the marketing of products of member societies, continued to make efforts to consolidate and strengthen its position. By the end of June 1978, it had 56 members with a paid up capital of Rs 18.81 lakhs. The total turnover of the Federation was of the order of Rs 46.32 lakhs during 1977-78.

CO-OPERATIVE SPINNING MILLS

The total number of spinning mills organised and installed in the co-operative sector was 85 and 56 respectively by June 1979. Of the 56 installed mills, 24 are growers' mills and 32 are weavers' mills. By June 1979, the number of installed spindles in the co-operative sector was 13.49 lakhs. The total membership of the co-operative spinning mills stood at 1.61 lakhs and their contribution towards share capital at Rs 13.32 crores. The total production of yarn during 1978-79 was around 731.45 lakh kgs. The sales value of the yarn produced by them was of the order of Rs 155 crores.

The spinning mills have organised, at the national level, the All India Federation of Co-operative Spinning Mills Ltd. The Federation is a promotional and developmental organisation and provides consultancy services for establishment of new mills and for expansion of existing mills. It also assists the spinning mills in their modernisation programmes by helping the mills in selection and purchase of machinery, examination of working plants and processing, selection of technical personnel, standardisation of accounting methods, etc. The Federation maintains a pool of key personnel for its member mills with a view to providing comprehensive technical expertise in the management of spinning mills.

SUPPLY OF AGRICULTURAL INPUTS

To help farmers, co-operatives in India play a significant role in the production and distribution of agricultural inputs, such as, fertilisers, seeds, pesticides and agricultural implements. Nearly 55 per cent of the total fertilisers distributed in the country are sold through the co-operative distribution system. The co-operatives have also diversified their activities in recent years to cover new lines of business like production of granular fertilisers, production, processing and distribution of seeds, manufacture and distribution of improved agricultural implements and setting up of agro-service centres.

IFFCO

The Indian Farmers Fertiliser Co-operative Ltd. (IFFCO) is a unique venture of co-operative in India in the field of large scale fertiliser manufacture. It is the leading producer of fertilisers in the country, its share in the national production being 10 per cent in terms of nitrogen, and 22 per cent in terms of phosphates. Registered in 1967 with the support of co-operatives in the country and the Government of India with the objective of manufacturing and marketing fertilisers for the benefit of farmer members of affiliated co-operatives, the membership of IFFCO covers about 27,000 co-operative institutions ranging from the national level federations to the village level co-operatives in 16 states and 3 union territories. It has set up ammonia and urea plants at Kalol (Gujarat) and a NPK complex fertiliser plant at Kandla (Gujarat). The ammonia and urea plants have been designed to a capacity of 3.00 lakh tonnes and 3.9 lakh tonnes per

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

year respectivtly and the NPK plant has a capacity of 3.75 lakh tonnes per annum.

IFFCO's Kalol and Kandla plants commenced production in early 1975. During the co-operative year 1978-79, the ammonia and urea plants produced 2.76 lakh tonnes and 3.47 lakh tonnes, respectively. The production of NPK fertiliser during the year was 5.51 lakh tonnes. The capacity utilisation achieved was 92 per cent, 88 per cent and 135 per cent respectively which is much higher than the national average of 59 per cent for ammonia, 64 per cent for urea and 80 per cent for NPK.

IFFCO's marketing strategy revolves around selling the concept of modern farming technology instead of just the fertilisers alone. For this purpose, it operates through field force of about 250 highly trained and motivated agricultural technologists who function at the grassroot level in the villages and lay down practical demonstrations in the use of balanced fertilisers, improved seeds and other inputs as also in soil testing and in obtaining credit from the co-operative societies.

IFFCO is setting up a naphtha based ammonia and urea plant at Phulpur near Allahabad designed to produce 900 tonnes per day of ammonia and 1,500 tonnes per day of urea, respectively. The estimated capital cost of this project is Rs 180.58 crores. The construction stage of this plant was almost complete by the end of December 1979 and the pre-commissioning activities were in progress.

The proposal for setting up another large sized ammonia and urea complex in the co-operative sector at Hazira, near Surat (Gujarat) based on natural gas available from the Bombay High/South Bassein has recently been approved. The complex will consist of two ammonia plants each with a capacity of 1,350 tonnes per day and two urea plants each having two streams of 1,100 tonnes per day with an estimated capital cost of about Rs 622.9 crores. While IFFCO will be initially responsible for all activities relating to the new complex, the complete ownership and the ultimate coordination of construction, commissioning and operation of the plants will be the responsibility of a co-operative society to be newly set up with IFFCO's sponsorship.

NAFED

The National Agricultural Co-operative Marketing Federation (NAFED), which represents 3,370 co-operative marketing societies in the country, promotes inter-state and export trade of farm produce. It exports commodities like onions, pulses, chillies, ginger, garlic and cardamom to Australia, Belgium, Canada, Fiji, Hongkong, Japan, Malaysia, Mauritius, Singapore, Sri Lanka, UK, USA and a number of African, West Asian and Gulf countries. Exports of pulses, onions and potatoes is canalised through NAFED. During the co-operative year 1978-79, NAFED's direct exports were valued at about Rs 68.57 crores. NAFED undertakes movement of essential commodities from surplus areas to scarcity areas and helps to ease consumer supplies. During 1978-79, commodities worth Rs 82.12 crores were handled by it for this purpose. NAFED has thus been exercising a healthy influence on market operations, as a consumer protection measure.

NAFED has entered marketing of fresh fruits, mainly apples, and also vegetables to help growers in under-developed hilly regions in north and south-eastern parts of the country. It has set up two fruit and vegetable processing units, one in north and one in south and the

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

products of NAFED have become quite popular. The Federation has established branches in all major port towns and capital cities in the country.

Co-operatives for the weaker sections of the society provide increased employment and income opportunities to different sections of the community like small and marginal farmers and fishermen. Functional co-operatives for programmes, like dairy, fishery and poultry mainly relate to the service of weaker sections.

Dairy

On 31 December 1978, out of a total of 190 dairy plants in operation in India, 80 were in the cooperative sector. On 30 June 1978, there were 27,241 primary milk supply co-operatives with a membership of 23 lakhs. During 1977-78, the co-operatives handled products valued at Rs 173 crores. The primary milk co-operatives are federated into 209 unions. A National Federation of Dairy Co-operatives was set up in 1970.

The National Co-operative Development Corporation gives financial assistance to dairy co-operatives. By the end of November 1979, the Corporation had sanctioned over Rs 6.77 crores for establishing 33 co-operative dairy units.

Fishery

The organisational structure of fishery co-operatives normally consists of primary fishery co-operatives at the base. A super-structure of federation of primary fishery co-operatives has also been built up. This consists of district and central federations and state-level federations. On 30 June 1978, there were nearly 5,251 primary fishermen's co-operatives with a membership of 5.74 lakhs. The total value of fish handled by these primaries during 1977-78 was of the order of Rs 23.24 crores. Attempts are being made to develop co-operative programme for intensification of fish production on a project basis.

NCDC also gives financial assistance for development of fishery co-operatives. In all, over 50 projects of fishery co-operatives involving a total outlay of Rs 269.55 lakhs were approved by the end of March 1979.

Poultry Co-operatives

By the end of June 1978, there were over 1,218 primary poultry co-operatives with a membership of 47,475. These handled poultry products valued at Rs 4.59 crores during 1977-78. An integrated approach of availability of chicks, technical guidance, equipment, disease control, extension work, supply of poultry feed and collection and marketing of poultry products through co-operatives is being encouraged.

Multi-purpose Tribal Co-operatives

As part of the programme of economic development of tribals, primary co-operatives in tribal areas are being reorganised to enable them to function as multi-purpose societies providing short, medium and long-term credit to the tribals, undertaking collection and marketing of agricultural and minor forest produce, arranging for supply of agricultural inputs as well as essential consumer goods. State level co-operative tribal development corporations/federations have so far been established in Andhra Pradesh, Bihar, Madhya Pradesh, Maharashtra, Rajasthan, West Bengal and Orissa to serve as apex organisations for marketing of minor forest produce and consumer goods.

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

Labour

Labour contract and construction co-operatives have been organised with a view to provide employment at reasonable wages to their members and preventing their exploitation by the contractors. During 1977-78, there were 10,466 labour co-operatives and forest labour cooperatives with a membership of 7.31 lakhs. The value of works executed by labour co-operatives rose from Rs 40.48 crores in 1975-76 to Rs 53.3 crores in 1977-78.

Housing

There were 29,516 primary housing co-operatives in the country with a membership of 18 lakhs as on 30 June 1977. These co-operatives constructed 4.4 lakh houses.

The number, membership and working capital of primary non-credit societies during 1976-77 are shown in table 16.2

TABLE 16.2 NUMBER, MEMBERSHIP AND CAPITAL OF PRIMARY NON-CREDIT CO-OPERATIVE SOCIETIES (1976-77)

Type of society	Number	Membership	Working Capital (Rs lakhs)
General purpose marketing societies	2,810	30,36,933	28,648
Specialised marketing societies	560	3,11,641	2,458
Milk supply societies	23,851	21,20,671	5,518
Live-stock /live-stock products societies	1,179	42,985	274
Farming societies	9,837	3,11,825	2,295
Irrigation societies	3,158	1,72,992	3,064
Other agricultural societies	8,845	5,68,023	6,689
Sugar societies	188	9,54,621	95,939
Cotton ginning, pressing societies	227	2,09,545	2,465
Other processing societies	749	1,76,721	2,087
Weavers societies	10,169	7,06,268	8,414
Spinning mills	71	1,71,984	11,966
Other industrial societies	34,915	9,57,543	8,322
Industrial societies (sericulture)	126	10,973	64
Consumer stores	15,580	43,58,619	6,312
Housing societies	29,516	17,97,767	74,425
Fishery societies	4,422	5,26,845	2,899
Other non-agricultural societies	6,179	4,96,568	2,285
Cold storages	73	24,348	558
Labour contract and construction societies	7,839	4,69,305	2,588
Forest labour societies	1,423	1,79,822	3,627
Transport societies	1,170	55,878	1,555

Training and Research

A three-tier well-organised structure of co-operative training is available in India. It consists of a National Institute of Co-operative Management, known as Vaikunth Mehta National Institute of Co-operative Management, Pune (VMNICM) for catering to the training requirements of senior personnel, a net work of 16 co-operative training colleges for training of intermediate personnel and 75 co-operative training centres for training of junior personnel. The National Institute of Co-operative Management at Pune and 16 co-operative training colleges situated at state headquarters are functioning under the administrative and financial control of the National Council for Co-operative Training of the National Co-operative Union of India which is financed entirely by the Government of India. Co-operative centres for training of junior category personnel are functioning under the control of

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

State Co-operative Union and state governments. The VMNICM has also undertaken research projects on the various aspects of co-operative movement in the country.

National-level Co-operative Federations

A major development over the past one decade has been the emergence of national co-operative federations which have added a new dimension to the co-operative infra-structure. With National Co-operative Union of India at the apex, the other national-level co-operative organisations include the National Agricultural Co-operative Marketing Federation, the All-India State Co-operative Banks Federation, the National Federation of Co-operative Sugar Factories, the National Co-operative Land Development Banks Federation, the National Co-operative Consumers' Federation, the National Federation of Industrial Co-operatives, the All India Federation of Co-operative Spinning Mills, the National Co-operative Housing Federation, the National Co-operative Dairy Federation of India and the National Federation of Co-operative Urban Banks and Credit Societies.

Workers' Participation in Management

In the context of a national pattern, which is being evolved, the system of workers' participation in management is being introduced in large co-operative industrial units. Special co-operative programmes directed towards increasing employment and income opportunities to vulnerable sections have been evolved and are being implemented. The National Co-operative Development Corporation has also extended its activities to cover co-operative programmes for weaker sections.

While the overall progress of the co-operative movement appears striking, there are wide regional disparities. The level of development of agricultural co-operatives is not uniform in all states. A number of schemes have been evolved with financial assistance from the central government for accelerating the growth of agricultural co-operatives in those states where its progress had been slow.

Another aspect that is currently receiving attention is the review of state co-operative laws with a view to overcoming the reported restrictive features of co-operative legislation which tended to prevent the quick growth of co-operative laws. The aim is to blend the principle of democratic control with the self-reliance of the co-operative movement.

Consultancy Services

With a view to provide expert management advice and guidance to consumer co-operative institutions in improving their business operations and managerial efficiency, a Consultancy and Promotional Cell was established in 1972 by the NCCF with financial support from government. The activities of the Cell have been further expanded under the ILO/SIDA Technical Assistance Programme under which services of ILO experts are made available to the Consultancy Cell in various fields of consumer co-operatives management, besides the training facilities abroad for Indian counterparts on techniques of management.

Supply to Students

This scheme, circulated to state governments and union territory administrations in July 1975, provides for supply of essential consumer articles, such as foodgrains, pulses, spices, vanaspati and other edible oils, tea and coffee, sugar and the like through consumer co-operative institutions to students' hostels and approved lodgings at preferential/concessional rates. This programme is under implementation in all the states and union territories.

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

Distribution of Controlled Cloth

Between 1964 and 1972, while there was statutory control on production and prices of certain varieties of cloth, there was no control on its distribution. This led to serious malpractices. Consequently, with effect from November 1972, the responsibility for distribution of controlled cloth was entrusted to the consumer co-operatives. With the entry of co-operatives in the field, a programme to increase the number of retail outlets in urban and rural areas was taken in hand. The National Co-operative Consumers' Federation introduced a Freight Equalisation Fund to ensure that controlled cloth reaches all places including far-flung areas at the same retail price. The total number of retail outlets for distribution of controlled cloth increased from 29,324 in June 1975 to 62,198 in June 1978. Of these, about 78 per cent are located in rural areas.

A new scheme of production and procurement of controlled cloth was introduced from 1 October 1978. In order to maintain the retail consumer prices of controlled cloth at the same old rate, the government is subsidising the price of controlled cloth through the NCCF to an extent of over 35 per cent.

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

17 ENERGY

The requirements of energy in India are met from both commercial and non-commercial sources. The most important sources of commercial forms of energy are coal and oil. Hydro power and coal contribute primarily to electricity production. Firewood, cowdung cakes and vegetable waste, which constitute the non-commercial forms of energy, meet the bulk of the rural energy demands.

India relies on imports for meeting about 65 per cent of its oil requirements. The dramatic change in the world energy situation following the steep increase in oil prices since October 1973 had its impact on India also. The value of import of crude oil and petroleum products went up from Rs 333.00 crores in 1973 to Rs 1,109.00 crores in 1974 and to Rs 1,147.00 crores in 1975, creating serious problems of balance of payments. As an immediate step, it was decided to introduce measures to curb consumption of petroleum products, specifically for non-essential uses, and identify and implement possibilities of substituting petroleum products with other forms of energy, mainly coal. The situation also emphasised the need and urgency for aiming towards self-sufficiency in energy supplies and evolving and adopting measures to achieve this goal. On the petroleum side, exploration activities have been intensified to locate new oil resources, particularly off-shore. In the coal sector, a comprehensive programme has been evolved and adopted to step up coal production to meet the increased demands. These steps have led to encouraging results.

Recognising the importance of energy for the overall economic development and the need for a co-ordinated approach to development of various forms of energy, a new Ministry of Energy was created in October 1974. This ministry has been given the responsibility for general policy in the field of energy and development of coal and power sectors.

The government had appointed in 1970 a committee to recommend an outline of a long-term national fuel policy. This committee (Fuel Policy Committee) submitted its final report in October 1974. Based on its recommendations and the subsequent developments in the field of energy, a comprehensive energy policy has been formulated, identifying measures to be adopted in regard to production, transportation, utilisation and conservation of various forms of energy. The main thrust of the policy is towards development of indigenous sources of energy with a view to achieving self-sufficiency, conservation of energy and elimination of wasteful uses.

In view of the fact that electricity is the most convenient and versatile form of energy, the demand for it in India has been growing at a rate faster than other forms of energy. Electricity plays a crucial role in both industrial and agricultural sectors and the productivity in both these sectors is closely linked with adequate availability of power. In view of this, power development has been given high priority in the development programmes.

POWER

Power development was initiated in India as early as 1900 with the

 CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

commissioning of the hydro-electric power station at Shivasamudram in Karnataka. In spite of this early beginning, the progress was not impressive till 1947. The installed capacity was as low as 19.00 lakh kw and the development was mainly concentrated around urban centres.

Power generation programmes, however, made phenomenal progress with the advent of the five year plans. During the First Plan (1951-56) construction of a number of major river valley projects like Bhakra-Nangal, Damodar Valley, Hirakud and Chambal Valley was taken up and these projects resulted in the stepping up of food production and also power generation. At the end of the First Plan the generation capacity stood at 34.2 lakh kw.

The emphasis in the Second Plan was on the development of basic and heavy industries, and the related need to step up power generation. The installed capacity at the end of the Second Plan reached the 57.00 lakh kw mark.

During the Third Plan the emphasis was on extending power supply to rural areas. A significant development in this phase was the emergence of inter-state grid system. The country was divided into five regions to promote power development on a regional basis. A regional electricity board was established in each region to promote the balance of 6.4 lakh kg from nuclear plants.

The three Annual Plans that followed the Third Plan aimed at consolidating the programmes initiated during the Third Plan.

The Fourth Plan envisaged the need for central participation in expansion of power generation programmes at strategic locations to supplement the activities in the state sector.

The progress during the period covering the Third Plan, the three Annual Plans and the Fourth Plan was substantial, with installed capacity rising to 184.6 lakh kw, comprising 69.7 lakh kw from hydro-electric projects and 108.5 lakh kw from thermal power projects and the balance of 6.4 lakh kw from nuclear plants.

Fifth Plan Targets

The main emphasis of the power programme in the Fifth Plan was on speeding up the construction and commissioning of power generation projects and improving the utilisation of the available capacities. Power stations with a total installed capacity of 77.2 lakh kw were commissioned during the Fifth Plan from April 1974 to March 1978 to bring the total installed capacity in the country to about 2.62 crores kw. An additional capacity of 30.4 lakh kw was added during 1978-79 bringing the total installed capacity to 2.92 crore kw including non-utilities. At the end of 1978-79 a number of power stations were at different stages of construction and it was estimated that an installed capacity of about 17.99 lakh kw had been added during 1979-80.

Table 17.1 shows the installed capacity and energy generated at the end of the Second, Third and Fourth Plans and at the end of 1978-79.

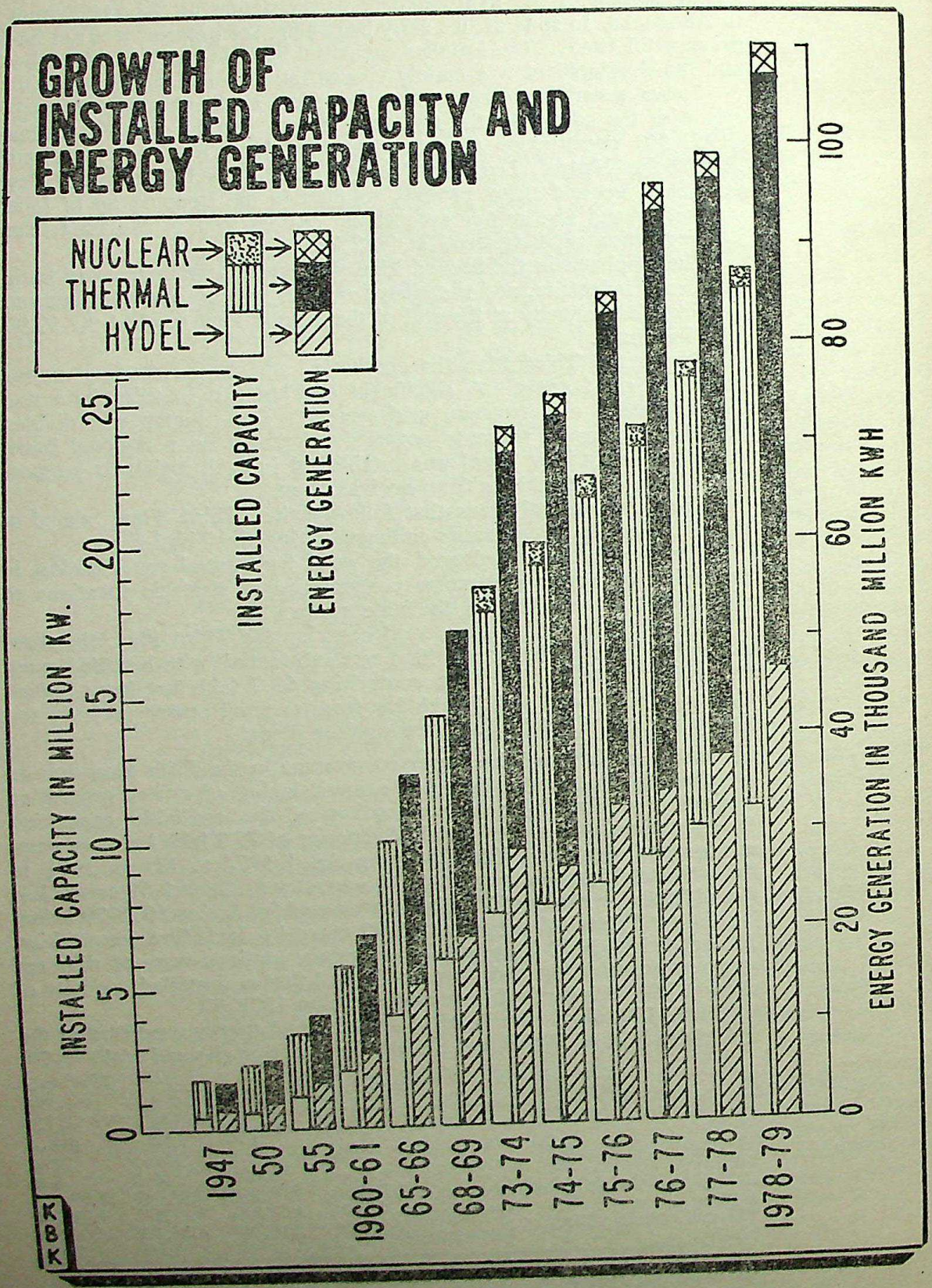
TABLE 17.1
INSTALLED CAPACITY AND ENERGY GENERATED

(lakh kw)

Sources of installed energy	1960-61	1965-66	1973-74	1978-79[1]
Installed *energy capacity*[2]	56·6	101·7	184·6	292·2
Hydro	19·2	41·0	69·7	108·4
Thermal including diesel	37·4	60·7	108·5	177·4
Nuclear	—	—	6·4	6·4
Energy generated (lakh kwh)	2,01,200	3,68,250	7,27,960	11,00,315
Hydro	78,370	1,52,250	2,89,720	4,71,044
Thermal including diesel	1,22,830	2,16,000	4,14,200	6,01,571
Nuclear	—	—	23,960	27,700

[1]Provisional
[2]Including captive plants.

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh



CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

Transmission and Distribution

Significant progress has been made in the expansion of transmission and distribution facilities in the country. The total length of transmission lines above 500 volts had been increased from about 29,000 km at the end of 1950 to 2.9 lakh km at the end of the Third Plan and to 8.79 lakh km in March 1978. Of this, the increase in the main transmission lines of 66 kv and above was from 8,270 km in December 1950 to 46,000 km in March 1966 and to 10.05 lakh km in March 1978. The highest transmission voltage in use at present is 400 kv, with the commissioning of 375 km. of line in Uttar Pradesh during 1977-78. Besides, additional 400 kv lines are under construction in Uttar Pradesh and Maharashtra.

Investment

The investment in the power sector in utilities only at the end of March 1974 was Rs 6,276 crores. A total outlay of Rs 7,294 crores was provided during the Fifth Plan (1974-75 to 1978-79) and the expenditure for the first four years (1974-75 to 1977-78) was Rs 5,716 crores.

The total energy generated in different regions from various sources, namely, hydro, thermal and nuclear during 1978-79 is given in table 17.2.

TABLE 17.2 ENERGY GENERATED REGION-WISE BREAK-UP

(Crore units)

Region	Hydro	Thermal	Nuclear[1]	Total
Utilities				
1. Northern	1,586·8	1,191·1	48·3	2,754·2
2. Western	906·4	1,985·5	228·7	3,120·6
3. Southern	1,890·7	745·1	—	2,635·8
4. Eastern	300·9	1,339·2	—	1,640·1
5. North-Eastern	24·4	68·1	—	92·5
Total All India Utilities	4,709·2	5,257·0	277·0	10,243·2
Non-utilities	1·2	758·8	—	760·0
Grand Total : All India	4,710·4	6,015·8	277·0	11,003·2

[1]Includes gas and diesel.

Patterns of Development

The pattern of power resources in the country has been changing from time to time depending on the availability of resources. At present, the States of Himachal Pradesh, Jammu and Kashmir, Karnataka, Kerala and Meghalaya depend primarily on hydro-electric power while Delhi, Bihar and West Bengal depend mainly on thermal power resources. Andhra Pradesh, Assam, Gujarat, Haryana, Madhya Pradesh, Maharashtra, Orissa, Punjab, Rajasthan, Tamil Nadu and Uttar Pradesh derive their power supply from both hydro and thermal sources.

About 95 per cent of the total installed capacity is accountable to hydro-power and coal-based thermal power stations. It was only in 1969 that a nuclear power station was commissioned. There are at present two nuclear power stations in operation in the country, one in Maharashtra (Tarapur) and the other in Rajasthan (Kota). Their relative contribution is still small.

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

DEVELOPMENT OF REGIONAL GRIDS

A centrally sponsored programme of establishing inter-state/regional links was included in the Fourth Plan and was continued in the Fifth Plan also. Under this programme, loan assistance to cover the entire cost of construction of the inter-state/regional links was provided by the central government to state governments outside the state plan ceilings.

India has now well connected power systems. Exchange of power is taking place regularly between a large number of states and this greatly facilitates the better utilization of the existing capacity. Regional load-despatch centres are being established in each Region to facilitate integrated operation of the constituent power systems. It is envisaged that, ultimately, these load-despatch centres would be equipped with on-line computers to control the power stations and power systems automatically.

Organisation

The responsibilities of the central government in the field of power development and supply can be classified broadly under the following heads : legislation; formulation of policy; planning and coordination; arranging of funds; foreign exchange and scarce material; establishment and operation of power stations and regional grids; design and consultancy services for power generation schemes; rural electrification expansion; resolution of inter-state aspects relating to power generation and supply; cooperation with neighbouring countries in the field of power development; and exploitation of new sources of energy other than nuclear power.

Electricity Supply Act 1948

The Electricity (Supply) Act, 1948 forms the basis of the administrative structure of the electricity industry. The Act provided for the setting up of a Central Electricity Authority, with responsibility, *inter alia,* to develop a national power policy and to co-ordinate the activities of the various agencies and state electricity boards. The Electricity (Supply) Act was amended in 1976 to enlarge the scope and functions of the Central Electricity Authority and to enable creation of companies for generation of electricity.

Central Electricity Authority

The Central Electricity Authority, established in 1950, was still recently functioning as a part-time body discharging primarily the arbitration function. Its other functions were being discharged by the Central Water and Power Commission (Power Wing). With the bifurcation of the CWPC in 1974, the functions of the Power Wing of the Central Water and Power Commission have been taken over by the Central Electricity Authority. The functions of the Central Electricity Authority are : developing a national power policy, formulation and coordination of plans for power development, techno-economic appraisal of projects, monitoring the progress of implementation of projects, ensuring efficient performance of power stations and systems, development of manpower, investigation of power projects, arbitration on certain matters, promotion and coordination of research and design activities in the power field, providing assistance to state governments and State Electricity Boards, collection and publication of statistical information relating to power supply industry and design and consultancy services.

 CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

The following corporations operate under the union Ministry of Energy.

— National Thermal Power Corporation and National Hydro Electric Power Corporation to establish regional power stations and bulk transmission facilities in the central sector.
— North-Eastern Electric Power Corporation to establish regional power stations in the north-eastern region.
— Damodar Valley Corporation responsible for unified development of the Damodar Valley.
— National Projects Construction Corporation to construct river valley and power projects.
— Rural Electrification Corporation to finance rural electrification schemes and to promote and finance rural electric corporations.

REGIONAL ELECTRICITY BOARDS

Regional Electricity Boards were set up in 1964 in each of the five regions to bring about voluntary co-operation among the states for developing regional grids and promoting coordinated operations of power systems. The five Regional Electricity Boards are : Northern Regional Electricity Board covering Haryana, Himachal Pradesh, Jammu and Kashmir, Punjab, Rajasthan, Uttar Pradesh, Chandigarh and Delhi; Western Regional Electricity Board covering Gujarat, Madhya Pradesh, Maharashtra, Goa, Daman and Diu and Dadra and Nagar Haveli; Southern Regional Electricity Board covering Andhra Pradesh, Karnataka, Kerala, Tamil Nadu and Pondicherry; Eastern Regional Electricity Board covering Bihar, Orissa, West Bengal, Sikkim, and Damodar Valley Corporation System; and, North-Eastern Regional Electricity Board covering Assam, Manipur, Meghalaya, Nagaland, Tripura, Arunachal Pradesh and Mizoram.

STATE ELECTRICITY BOARDS/ POWER CORPORATION

State Electricity Boards have been established in 18 out of the 22 states and they are mainly responsible for generation and distribution of electricity in their respective states. The States of Manipur, Tripura, Sikkim and Nagaland are yet to establish their state electricity boards. The Electricity Supply Act (1948) was amended in October 1976 which *inter-alia* assigned a larger role to the Central Electricity Authority particularly in the preparation of national power plans and provided for establishment of central or state generating companies. Two central generating companies *viz.* National Thermal Power Corporation and National Hydro Power Corporation have already been set up. Out of the total installed capacity of the country at the end of March 1979, about 68.41 per cent is owned by the state electricity boards, 4.75 per cent by private utilities, 6.68 per cent are captive plants and the balance 18.43 per cent are owned by the state government/central government and their undertakings, corporations and municipalities.

TRAINING MANPOWER DEVELOPMENT

The equipment used in modern power stations and power systems are highly sophisticated requiring specially skilled personnel for their installation and operation. A Power Engineers' Training Society was set up by the Central Government in 1979 for meeting the training need in the power sector and the training institutes at Neyveli, Durgapur, Nagpur and Delhi have been transferred to the Training Society. A simulator is also being installed at the Thermal Power Station Training

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

Institute at Delhi for training purposes. Simulator is a sophisticated equipment in which the entire operation of a power station can be simulated and is considered to be a modern aid for training. A Power Systems Training Institute and Hot-Line Training Centre have also been established in Bangalore to train engineers in the operation of power systems and load-despatch techniques and maintenance of transmission lines.

Resources for Power Development

Besides the conventional sources of power like thermal, hydro and nuclear fuels the Ministry of Energy is examining the prospects of development of power from non-conventional sources such as geothermal energy, solar energy, wind energy and tidal energy. Harnessing of these sources, however, requires considerable research and development efforts.

Sources of Hydro-electric Power

The first systematic assessment of the country's economic hydro potential was conducted by Central Water and Power Commission during 1953-58, when the total economically exploitable potential was placed at nearly 2.5 crore kw continuous, to be generated by 260 hydro schemes. In view of the technological advancement and changed conditions in power systems etc., the Central Electricity Authority has again taken up the systematic re-assessment of the country's economic hydro potential. As a first step, a quick preliminary assessment has been made, which places the country's economic hydro-potential equivalent to 4.5 crore kw continuous, corresponding to an annual energy potential of 394.2 Twh based on about 500 potential sites considered suitable for economic exploitation. Detailed studies of re-assessment are continuing. The schemes in operation utilise equivalent of about 48 lakh kw continuous. With the completion of a number of schemes which are under execution, about 23 lakh kw continuous, will be utilised by 1984.

In addition, the Central Electricity Authority is also attempting to identify suitable sites for development of economic pumped storage schemes and a few of them have already been identified.

Coal for Power

Coal based thermal and diesel stations contribute about 59 per cent of the electricity generation in the country and they are expected to play an important role in power generation in future.

Considerable economies can be achieved by locating large thermal power stations near colliery pit heads and distributing power from them through extra high voltage transmission lines. It is proposed to initially establish, in a phased manner, super thermal stations in the various regions of the country, at Singrauli (UP), Korba (MP), Ramagundam (AP) and Farakka (WB).

Oil and Gas for Power

Use of oil and gas for power generation has so far been very limited. This is confined to a few thermal stations located close to the oil/gas wells and refineries and diesel and gas turbine stations. Out of the total oil used in the country only about 8 per cent is used for power generation.

Nuclear Energy

Nuclear power generation was initiated in the country in 1969 with the commissioning of the nuclear power station at Tarapur with an installed capacity of 420 mw. The installed capacity of nuclear power plants at present is 640 mw.

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

Tidal Energy

Large tidal variations are known to occur in the Gulfs of Cambay and Kutch on the West Coast and the estuary of the Ganga on the East Coast and these have been attracting attention from the point of view of tidal power development. Preliminary studies have established the availability of large tidal potential in the Gulfs of Cambay and Kutch and the possibilities of small scale tidal power development in the Sundarbans area on the East Coast. Further investigations and studies are required to determine the mode of development, the features, the potential, the costs involved and the economic viability.

Geothermal Energy

The activities in the geothermal field in the country are directed towards location of promising hydro-thermal reservoirs for power generation and other possible uses of the heat energy. Geothermal manifestations in the form of hot springs occur in several regions of the country. The most important among these are in the North-Western Himalayas and along the West Coast. Geothermal explorations are in progress in Puga in Jammu and Kashmir, in Parbati valley in Himachal Pradesh and in the West Coast.

Solar Energy

Utilisation of solar energy is of great importance to India since it lies in a temperate climatic region where sunlight is abundant for a major part of the year. An integrated programme of research, product development and demonstration projects involving several agencies has been undertaken to develop the technology for application of solar energy for various purposes. The research activities are being directed both towards solar thermal applications and direct conversion of solar energy into electricity. A major development is the 10 kw demonstration solar power generation unit which has been successfully developed under a project undertaken jointly by India and West Germany. Some of the other areas in which research work has been undertaken are refrigeration and cold storage, desalination of sea water, solar pumps and solar photo-voltaic cells.

PATTERN OF CONSUMPTION

The per capita consumption of electricity at the time of independence was 13 kwh which rose to 26 kwh by the end of First Plan in 1956. It increased to 97.5 kwh in 1973-74 at the end of Fourth Plan and to 119.5 kwh during 1976-77. The pattern of electricity consumption in the country at present is as follows : domestic 9.8 per cent, commercial 6.2 per cent, industries 61.8 per cent, public lighting 0.8 per cent, railway traction 2.9 per cent, agricultural 15.7 per cent, public water works, sewage pumping and others 1.8 per cent. The proportion of electricity consumption in domestic consumption steadily decreased from 12.4 per cent in 1951 to 8.6 per cent in 1969-70 and which started rising again and at present in the year 1978-79 it stood at 9.8 per cent. The demand for agriculture has at the same time registered a rapid growth increasing from 4.3 per cent in 1951 to 15.71 per cent in 1978-79. During 1978-79, in the States of Haryana Punjab, U.P., Tamil Nadu and Andhra Pradesh the consumption of electricity in the agricultural sector amounted to 38.1, 34.9, 31.4, 26.4 and 20 per cent respectively.

RURAL ELECTRIFICATION

Out of a total of 5.76 lakh villages in the country, nearly 2.33 lakhs constituting 40.4 per cent were electrified by the end of March 1979 benefiting a rural population of 62 per cent. The total number of irri-

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

gation pumpsets/tubewells energised in the entire country was 36.00 lakhs. The strategy of rural electrification continues to be oriented towards agricultural production. In order to energise larger number of pumpsets, a special project agriculture scheme has been introduced with the combined participation of Rural Electrification Corporation, Agricultural Refinance and Development Corporation and commercial banks. Special attention is, however, being paid to the development of backward and undeveloped areas in general, and areas predominantly inhabited by the tribal population and weaker sections of the society, in particular. Intensification schemes in areas already electrified have also been taken up for extension of electric supply to small scale and cottage industries. While three states, Haryana, Punjab and Kerala, have already attained cent per cent electrification of their villages, the level of electrification in seven states—Andhra Pradesh, Gujarat, Himachal Pradesh, Jammu and Kashmir, Karnataka, Maharashtra and Tamil Nadu is higher than the all-India average. Under the revised Minimum Needs Programme, it is expected that 50 per cent of the villages would get electrified in every state and union territory by the end of 1987-88. The programme covers all the north-eastern hilly states and tribal sub-plan areas in addition to districts of other eligible states and union territories where level of electrification is less than 25 per cent.

Rural Electrification Corporation

One of the main difficulties faced in increasing the pace of rural electrification was its financing. A significant step was taken by the Government of India in 1969 by setting up the Rural Electrification Corporation to channelise funds for rural electrification.

The Fourth Plan laid stress on provision of electricity to backward, harijan and tribal areas and primary health centres. A scheme was introduced to advance loans to the State Electricity Boards for providing lighting facilities to harijan basties in the villages already electrified. These loans are channelised through the Rural Electrification Corporation.

In the Fifth Plan a target of electrifying an additional 1.10 lakh villages and energising an additional 15 lakh agricultural pumpsets was envisaged. An outlay of Rs 300 crores was provided during the first three years of the Plan. Electrification of 46,000 additional villages and 6.1 lakh additional pumpsets was achieved during the same period. For the year 1977-78, an outlay of Rs 174.5 crores was envisaged.

A special feature of the Fifth Plan was the introduction of the National Programme of Minimum Needs under which the Government of India proposed provision of the basic necessities to the underdeveloped regions of the country, so as to bring them at par with other regions. The Minimum Needs Programme for rural electrification provided for the electrification of 36,500 villages in the backward areas and backward states of the country so as to raise the percentage of rural population benefited by electricity to at least 30-40 per cent in each state by the end of the Fifth Plan.

MAJOR POWER PROJECTS

In March 1979, there were 46 major hydel power stations and 52 major thermal power stations having an installed capacity of 50 mw and above. There were also a number of power projects under construction, the benefits from which were expected during the Fifth Plan and

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

shortly thereafter. Some of the major power projects are listed in tables 17.3 and 17.4.

TABLE 17.3
MAJOR POWER PROJECTS (HYDRO)

Stations in operation	Capacity (MW)	Schemes under construction	capacity (MW)
(1)	(2)	(3)	(4)
	Northern	**Region**	
Bhakra Nangal Station	1,205·0	Baira Siul	180
Dehar	660	Yamuna St. II	120
Pong	240	Salal	345
Lower Jhelum	105	Beas Stage I	330
Rana Pratap Sagar	172	Beas Stage II	120
Jawahar Sagar	99	Lower Jhelum	
Rihand	300	(Unit II & III)	70
Yamuna Stage II	240	Rishikesh Hardwar	144
Yamuna Stage I&IV	115	Maneri Bhali	90
Obra	99	Stage I	
Giri Bata	60	Dehar Ext.	330
Ramganga	198	Pong Ext.	120
		Mahi	140
	Western	**Region**	
Ukai	300	Kadana	240
Gandhi Sagar	115	Pench	160
Koyna	880	Bhira Tail Race	80
Bhira	141		
Tata	276		
	Southern	**Region**	
Lower Sileru	400	Upper Sileru	120
Upper Sileru	120	Srisailam	440
Machkund	114·7	Kalinadi Stage I	910
Nagarjunasagar	110	Varahi	115
Kalinadi	135	Idamalayar	75
Sharavathy	891	Kadamparai P.S.	300
Jogs	120	Nagarjunasagar	400
Iddiki	390	Balimela	60
Sabarigiri	300	Kakkad	50
Kundah I-V	535		
Mettur	240		
Periyar	140		
Kodayar 1 & 2	100		
Sholayar 1 & 2	95		
	Eastern	**Region**	
Balimela	360	Subernarekha	65
Hirakud	270	Rengali	100
Subenarekha	65	Upper Kolab	240
	North-Eastern		
Kyrdemkulai	60	Loktak	105
		Khopili	150
		Lower Borpani	100

INTER-NATIONAL CO-OPERATION

India has been co-operating with neighbouring countries in the field of power development.

The co-operation between India and Nepal in the field of power development has been varied and significant. India has financed and constructed the 21 mw hydro-electric project at Trisuli, one of the important sources of power supply in Nepal. Multipurpose-developments in the Gandak and Kosi basins have been taken up for mutual benefit under agreements between the two countries. The Gandak Project includes a 15 mw power station, which is being financed and

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

constructed by India. This station, which is expected to be commissioned soon, will ultimately be handed over to Nepal. A 20 mw hydel station is included under the Kosi Project. Three units of 5 mw at this power station have already been commissioned. Financed and constructed by India, the benefits from this project would be shared between the two countries. There is an agreement under which power is being exchanged between Nepal and India at Border points, mainly to supply electricity to isolated villages.

TABLE 17.4
MAJOR POWER PROJECTS, THERMAL AND NUCLEAR

Stations in operation	Installed capacity (MW)	Schemes under Construction	Capacity (MW)
Northern Region	**Thermal**		
Badarpur Stage I & II	510	Panipat Unit II	110
I. P. Station	284·1	Badarpur Stage III	210
Rajghat	59·6	Faridabad Ext.	60
Panipat	220	Kota	220
Faridabad	135	Obra Stage III	400
Guru Nanak	440	Paricha	220
Obra Stage I & II	1,350	Singrauli STPS Stage I	1,630
Hardva Ganj	480	Ropar	630
Panki	284	Anpara	420
Western Region			
Dhuvaran	534	Parli Ext.	210
Ukai	700	Satpura Unit 7,8&9	630
Gandhi Nagar	240	Nasik Ext.	210
Satpura	512·5	Bhusawal Ext.	210
Korba	420	Uran Gas Turbines	240
Parli	60	Trombay	500
Amar Kantak	300	Korba East	120
Koradi	690	Korba West	420
Trombay	337.5	Wanakbori	1,100
Nasik	490	Kordi	420
Khaperkheda	90	Chandrapura	420
Bhusawal	272·5	Korba STPS	630
Sabarmati	110		
Southern Region			
Kothagudem	680	Vijayawada	400
Neyveli	600	Tuticorin Unit 2,3	420
Ramagundam	100		
Vijayawada	210	Raichur	420
Ennore	450	Neyveli Second Mini cut	420
Tuticorin	210	Ramagundam	420
Eastern Region			
Patratu	620	Patratu 9&10	220
Barauni	145	Barauni Ext.	220
Chandrapura	780	Talcher Ext.	220
Durgapur	290	Bokaro Ext.	210
Bokaro	247·5	Durgapur (DVC)	210
Talcher	250	Bandel Ext.	200
Bandel	330	Sataldih IV	120
D.P.L.	285	Kolaghat	630
Santaldih	360	Tita Garh	240
C.E.S.C.	420	Durgapur (DPL)	110
		Upper Kolak	160
North-Eastern Region			
Namrup	115·5	Bongaigaon	120
	NUCLEAR		
Rajasthan	220	Rajasthan	235
Tarapur	420	Narora	470
		Kalpakkam	470

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

A major step in Indo-Bhutan co-operation in the field of power was taken with the signing of an agreement in 1974 for the implementation of the Chukha Hydro-Electric Project. The project will be implemented by Bhutan and funded by India. The power generated would first be used to meet the needs of Bhutan and the surplus power would be bought by India. India has been providing assistance to Bhutan in establishing micro-hydel stations and associated distribution facilities. The foot-hill towns of Phuntsholing and Samchi in Bhutan receive power from Jaldhaka Project located on the border between India and Bhutan, which has been developed under an agreement between the two countries for mutual benefit.

India and Bangladesh have constituted the Indo-Bangladesh Joint Power Co-ordination Board to maintain liaison between the two countries and identify areas of co-operation in the field of power.

India has assisted Afghanistan in the construction and commissioning of the first stage of the Chardeh-Ghorband project (3×100 kw). Recently, India agreed to supply generating and transmission equipment for the second stage extension of the Chardeh-Ghorband project (1×100 kw) and Bamain (3×250 kw), Faizabad (3×85 kw) and Khulm (2×100 kw) micro-hydel projects. Ninety per cent of the equipment for all the projects has already been supplied and the balance is being procured.

POWER RESEARCH

The Central Power Research Institute was established in 1960 for taking up an effective programme of power research in the context of an expanding power supply industry and now functions as an autonomous society. The institute has two units—one at Bangalore and the other at Bhopal. Bangalore Unit has a high-voltage laboratory, an insulation laboratory, a partial discharge detection division, a transmission and distribution division, a power system division, and an instrumentation development division.

The Bhopal unit has a switch-gear testing and developing station. The Institute has carried out important research in the area of insulation and it has also been providing testing and consultancy services in respect of switch-gear, HRC fuses, power cables, PVC cables, etc., for a number of organisations. A large tower testing station which is capable of testing transmission line towers upto 750 kv rating has recently been commissioned at Bangalore. A 2,500 MVA short circuit testing station with synthetic testing facilities is being set up at Bangalore by the society.

COAL

Coal is an important mineral as a source of energy. Its actual production for 1978-79 was about 10.19 crore tonnes and for 1979-80 is estimated at 10.40 crore tonnes. The production target of Coal India Ltd., and Singareni Colleries Ltd., for 1980-81 has been set at 11.35 crore tonnes which would be 9 per cent over the production achieved in 1979-80.

During 1979-80 (up to January 1980), 16 coal mining projects were sanctioned by the government (besides those sanctioned by the Coal India Ltd) for a targeted capacity of 2.28 crore tonnes, per annum at an estimated capital cost of Rs 314.40 crores. Besides, two projects for controlling the surface fires in Lodna and Jogta Collieries of BCCL have also been sanctioned at a cost of Rs 28.98 crores.

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

In respect of SCCL, during 1979-80 (upto January 1980), seven advance action proposals were sanctioned by the government for a targeted capacity of 4.07 crore tonnes at an estimated cost of Rs 68 crores.

Fuel Policy Committee Report

The Fuel Policy Committee, appointed by the Government of India in October 1970, in its final report submitted in 1974, made recommendations on various aspects of development and exploitation of commercial sources of energy. Some of the important recommendations in respect of the coal sector are : (a) coal should be considered as a prime source of energy in the country for the next two decades and the energy policy of the country has to be evolved on this basic premise; (b) a perspective plan should be prepared for coal production and a shelf of project reports should be prepared well in advance in each plan period; (c) the possibility of projecting large scale mechanized open cast mines in Jharia should be studied; (d) plans for thermal power generation should be coordinated with the plan for coal production; (e) separate plans should be drawn up for opening export-based coal mines near the ports; (f) all major cities should be provided with gas plants; (g) selection of optimal technology for coal-mining should be made on economic grounds using proper weightage for availability of abundant labour; and (h) a second mine should be cut and opened at Neyveli.

Coal Mining

Coal mining was first started at Raniganj, West Bengal in 1774. After Independence, coal mining was stepped up and production has already risen from 3.2 crore tonnes in 1950 to well over 10 crore tonnes.

The Government of India nationalised the coking coal mines in 1972 and the non-coking coal mines the following year. As a result, the production of coal in the country is now almost completely in the public sector. The only important mines which have not been nationalised are the captive coking coal mines of the two private sector steel companies.

The production of coal in public sector is organised mainly by Coal India Limited through its subsidiary companies. These are Eastern Coal Fields Ltd., Bharat Cocking Coal Ltd., Central Coal Fields Ltd., Western Coal Fields Ltd. and Coal Mines Planning and Design Institute Ltd. The Singareni Collieries Company Ltd., a public sector undertaking, is also engaged in coal production.

Coal Washeries

Fourteen coal washeries are operating for the benefit of coking coal. There is also a small washery for non-coking coal. The total input capacity of the coking coal washeries is estimated at about two crore tonnes.

The Coal Board was abolished in April 1975 under an Act of Parliament. As a result of it, the work of conservation and safety in coal mines is undertaken directly by the Coal Company under the direction of Coal Conservation and Development Advisory Committee constituted under CM (C&D) Rules 1975.

Lignite

Lignite, though inferior in calorific value (one tonne of Gondwana coal equals about 2 tonnes of lignite), is particularly important to western and southern regions due to the geographical location of the deposits and the absence of coal in these regions. Out of a total of

 CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

21,000 lakh tonnes of lignite in the country, about 19,000 lakh tonnes are available in the Neyveli area alone.

The integrated lignite project at Neyveli was set up during the Second Plan for mining of lignite. The capacity of the project is being increased in the first instance to 45 lakh tonnes and ultimately to 65 lakh tonnes from the present production of 35 lakh tonnes.

The quantity and value of lignite produced from 1974-75 to 1977-78 is given in table 17.5.

TABLE 17.5
PRODUCTION OF LIGNITE

Year	Quantity (Lakh tonnes)	Value (Rs crores)
1974-75	28·1	13·70
1975-76	28·3	14·97
1976-77	40·2	18.61
1977-78	35·80	19.50

OIL

Petroleum industry in India has made headway only after independence. Starting from a modest level of indigenous crude production of around 2.5 lakh tonnes and consumption level of 34.00 lakh tonnes in the year 1950-51, crude oil production during 1978-79 was 1.16 crore tonnes and the consumption level around 2.96 crore tonnes. About 1.47 crore tonnes of crude oil and 39.00 lakh tonnes of petroleum products were imported to meet the country's requirement in 1978-79. The refinery throughput during 1978-79 stood at 2.60 crore tonnes.

The oil industry in India is divided into three broad segments, viz., (i) oil exploration and production; (ii) refining and marketing and (iii) petrochemical and downstream units.

There are two principal organisations which are engaged in the exploration and production of crude oil in the country. They are the Oil and Natural Gas Commission (ONGC), wholly owned by the Government of India and Oil India Ltd. (OIL), a joint sector undertaking. To a very limited extent, Assam Oil Company (AOC) is also engaged in the production of crude oil, but because of its fast depleting reserves in Assam area, its production is negligible.

Oil and Natural Gas Commission

The ONGC, set up in 1956, is the principal government agency responsible for the exploration and production of oil in both onshore and offshore areas of the country. Its sphere of operation extends over the entire country except for certain oil leased areas in north east given to AOC and OIL. During 1978-79, it produced about 89.09 lakh tonnes of crude oil, which accounted for about 77 per cent of the total production in the country. In onshore areas, ONGC, during 1978, discovered gas at Sisodra, Gajera, West Matwan and Walner in Gujarat and oil together with gas at Viraj and West Sobhasan in Gujarat, whereas in offshore areas gas was discovered in South Tapti and B-55 and oil in R-9 structure.

A significant achievement of ONGC has been the progress achieved in the development of Bombay High. During 1978-79, the work on the laying of sub-sea pipeline from Bombay High to Uran and transfer line from Uran to Trombay has been completed. Since July 1978

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

oil and gas had started to flow through these pipelines. A rate of production of approximately 44 lakh tonnes per annum of crude oil from Bombay High has since been achieved. By 1 July 1979 ONGC had drilled a total of 1,548 wells in the onshore area, out of which 842 were found to be oil bearing and 103 gas bearing. Besides, ONGC had drilled 104 wells in the offshore area by that date, out of which 59 were oil bearing and 11 gas bearing.

The Commission has also been operating in foreign countries and is presently executing service contracts for exploration/drilling in Iraq and Tanzania. It is also operating through its subsidiary Hydro-Carbons India Ltd., in Iran.

Oil India Limited

The Oil India Ltd. was established in February 1959 on a 50 : 50 partnership basis, between government of India and Burmah Oil Company of UK for exploration and production of crude oil and natural gas in Assam and Arunachal Pradesh regions. The Company has also completed an aeromagnetic survey of their PEL (Petroleum Exploration Licence) areas (both onshore and offshore) in the Mahanadi delta region. During 1978-79, it produced 26.71 lakh tonnes or roughly about 21 per cent of the total crude oil production in the country. Up to 1 July 1979, it had drilled 409 wells and had produced in all about 4.56 crore tonnes of crude oil.

Refineries

There are at present 11 refineries, 10 in the public sector and one tiny refinery of Assam Oil Company (AOC) in the private sector. The 11 refineries together processed 2.59 crore tonnes of crude oil during 1978-79, of which 2.54 crore tonnes was in the public sector and 5.24 lakh tonnes in the private sector.

The private sector refinery (AOC) is at Digboi. The Burma-Shell Refinery at Trombay and Caltex Refinery at Visakhapatnam together with their marketing associates were taken over by the government in 1976. The Burmah Shell Refinery was renamed as Bharat Petroleum Corporation Ltd., (BPCL) and the Caltex Oil Refining (India) Ltd., was amalgamated with the Hindustan Petroleum Corporation Ltd., (HPCL), in May 1978. The other public sector refineries at Gauhati, Barauni, Koyali and Haldia are owned by the Indian Oil Corporation Ltd., (IOC), while those at Cochin, Madras and Bongaigaon are owned by three separate joint sector companies. Table 17.6 gives refinerywise details of the years of commencement of production, their present capacities and actual crude throughput during 1977-78 and 1978-79.

TABLE 17.6
CAPACITY AND PRODUCTION OF REFINERIES

Name of refinery	Year in which production commenced	Capacity (lakh tonnes) 1-4-79	Actual crude run (lakh tonnes)	
			1977-78	1978-79
Barauni (IOC)	1964	33·0	30·6	26·61
BPCL Bombay	1955	52·5	45·12	46·93
Cochin	1966	33·0	29·33	28·62
Digboi	1901	5·0	5·34	5·24
Gauhati (IOC)	1962	8·5	8·17	8·25
Haldia (IOC)	1975	25·0	20·96	22·13
HPCL Bombay	1954	35·0	28·97	28·00
HPCL Vishakhapatnam	1957	15·0	13·04	13·29
Koyali (IOC)	1965	73·0	41·29	52·56
Madras	1969	28·0	26·16	27·59
BR & PL	1979	10·0	—	0·57

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

The capacity of the Koyali refinery has been increased from 43 lakh tonnes to 73 lakh tonnes. The new refinery at Bongaigaon in Assam, with an annual capacity of 10 lakh tonnes has recently been completed and in February 1979 its crude distillation unit went on stream.

NEW REFINERY PROJECTS
Mathura

The biggest refinery in the country is being set up at Mathura in Uttar Pradesh with a capacity of 60 lakh tonnes per annum. Crude oil for the refinery to be obtained through imports and from Bombay High will be received at a location in the Gulf of Kutch and transported across over a distance of 1,115 km by pipeline. The refinery is expected to be commissioned by the end of 1980.

Pipelines

Prior to 1964-65, a pipeline had been constructed to transport the crude from the Naharkatiya oil fields to Gauhati and Barauni refineries. Since then, various multi-product pipelines have been laid. These are Gauhati-Siliguri, Koyali-Ahmedabad, Barauni-Kanpur and Haldia-Maurigram-Rajbandh pipelines. There is also a network of pipelines in Gujarat for transporting crude oil from the Gujarat oil fields to the Koyali refinery.

A 1,256 km pipeline is being laid down from Salaya in the Gulf of Kutch to Koyali and Mathura via Viramgam in Gujarat to supply crude obtained through import and from Bombay High to the expanded Koyali and Mathura refineries. The crude will be received at an off-shore terminal, which is the first of its kind to be set up in the country. The off-shore terminal and the Salaya-Viramgam-Koyali sector of the pipeline were completed in September 1978 and the crude oil started flowing to Koyali refinery. The completion of the Viramgam-Mathura sector will synchronise with the completion of Mathura refinery.

Indian Oil Blending Limited

The Indian Oil Blending Limited, a wholly-owned subsidiary of the Indian Oil Corporation is engaged in blending lubricants and greases for IOC. During 1978-79, it had a total production of 2,21,980 tonnes of lubes and 6,234 metric tonnes of grease which are used to improve the performance of the petroleum based lubricants and fuels.

Lubrizol India Limited

To produce various chemical additives, a plant was set up in Bombay in 1966 by Lubrizol India Limited, a joint venture of the Government of India and the Lubrizol Corporation of the USA. The production in 1978-79 was about 13,538.5 tonnes.

Engineers India Limited

Engineers India Limited (EIL), was set up in 1965 for providing engineering consultancy services for the development of the petroleum, petro-chemical, fertilizers, chemicals and other allied industries. Apart from assignments in India, EIL have also successfully competed for some assignments in the international market. It is, at present, providing its services to Iraq, Bahrain and Sri Lanka in setting up various oil projects/fertilizer plants. In October 1978, it signed a new contract with Algeria for providing comprehensive services for a number of product pipelines.

Marketing and Distribution

The marketing and distribution of oil products is done by the public sector oil companies with the exception of a small quantity produced

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

and marketed by the private sector Assam Oil Company in the north-eastern parts of the country. As on 1 April 1979, there were 11,751 retail outlets, out of which 4,186 were owned by IOC, 3,281 by BPCL and 3,197 by HPCL/HPCL VMU. The bulk of the marketing operations is handled by the IOC besides three other public sector companies operating in the field, *viz.*, Bharat Petroleum Corporation Ltd., Hindustan Petroleum Corporation Ltd., and Indo-Burma Petroleum Co. Ltd. During 1978-79 the IOC accounted for a share of about 61 per cent in the marketing of petroleum products, followed by 17.3 per cent by amalgamated unit of HPCL and 16.7 per cent by BPCL.

Indian Oil Corporation Limited

The Indian Oil Corporation (IOC) was set up in 1964 by amalgamating the Indian Refineries Limited and the Indian Oil Company Limited. The IOC has two divisions, namely, the refineries and pipelines division and the marketing division. Under the refineries divisions there are four refineries at Gauhati, Barauni, Haldia and Koyali (Gujarat). The Corporation has a Research and Development Centre at Faridabad (Haryana). The Centre provides technical service to customers and is engaged in the development of sophisticated lubricating oils.

The IOC marketed about 1.70 crore tonnes of petroleum products during 1978-79 which constituted about 61 per cent of the total sales of the oil industry during 1978-79. The number of retail outlets of the IOC which stood at 4,049 on 1 January, 1978, rose to 4,155 on 1 January 1979. The marketing of cooking gas (LPG) for domestic use is handled by IOC in all important cities and towns of the country.

Bharat Petroleum Corporation Limited

With effect from 24 January, 1976 government acquired the entire share capital of Burma Shell Refineries Limited, and the assets and liabilities of Burma Shell Oil Storage and Distributing Company of India Limited, in relation to its undertakings in India. Now named as Bharat Petroleum Corporation Limited (BPCL), it has a refinery at Bombay. It has, as on 1 April, 1979 a network of 3,281 retail outlets in the country and it handled about 46.01 lakh tonnes of petroleum products during 1978-79, which constituted about 16.3 per cent of the total sales of oil industry.

Hindustan Petroleum Corporation Limited

The Hindustan Petroleum Corporation was formed when government took over 74 per cent shares of ESSO Oil Company in India on 14 March 1974. On 1 October, 1976 the remaining 26 per cent shares were also acquired. ESSO had a refinery at Bombay.

On 30 December, 1976 the entire share capital of Caltex undertakings in India was taken over by government and the company was named Caltex Oil Refining (India) Limited. With effect from 9 May, 1978 it has been merged with the Hindustan Petroleum Corporation Limited. Caltex had a refinery at Visakhapatnam. The amalgamated HPCL with a total of 3,197 retail outlets (as on 1 April, 1979) handled about 50.47 lakh tonnes of petroleum products during 1978-79, which constituted about 17.2 per cent of total sales of the industry.

Indo-Burma Petroleum Company Limited

Apart from marketing petroleum products obtained from IOC, this public sector company has three Divisions, *viz.*, oil division, engineering division and chemicals division. In April 1976, IBP entered into

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

an agreement with M/s Ireco Chemicals of USA for the manufacture of industrial explosives in the country. As on 1 April, 1979 it had a total of 922 retail outlets for marketing of various petroleum products.

Multi-purpose Outlets

A scheme for the conversion of the existing retail outlets (petrol pumps), particularly in the rural and semi-urban areas, into multipurpose commodity distribution centres, was launched by the public sector oil companies in 1975. The object of the scheme is to provide at reasonable prices, to the farmers and landless labourers in rural areas, agricultural inputs like fertilizers and pesticides, and articles of daily necessity under one roof. As on 1 April, 1979 the total number of such outlets in existence was 610, out of which 62 were farm fuel outlets.

Imports Exports

The indigenous production of crude oil and petroleum products is inadequate to meet the requirements of the country's growing economy. This necessitates imports of crude oil and petroleum products. During 1978-79, the country imported 1.46 crore tonnes of crude oil and 38.69 lakh tonnes of petroleum products. While the foreign exchange spent on the import of crude oil and petroleum products during 1978-79 was about Rs 1,677 crores, the foreign exchange earned by way of exports/sales amounted to Rs 4.11 crores.

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

18 INDUSTRY

A century of industrial development pales into insignificance when compared with the rapid industrial stride made during over two and a half decades of planned development. Industrial production increased at an average growth rate of about 5 per cent per annum during the period 1970-78. While almost al lgroups of industries contributed to this increase, the growth has been particularly marked in the newer and more complex industries, such as, petroleum products, chemicals and chemical products, metal products, electronics and other electrical machinery, transport equipment and power generation. The share of manufacturing sector in the net domestic product increased from 13.9 per cent in 1960-61 to 14.9 per cent in 1977—78.

Side by side, the different five year plan periods saw the expansion and diversification of the industrial structure with the establishment of new units in the existing fields as well as the setting up of new enterprises. As a result, the number of industrial units has increased significantly. In 1951, there were only two major units producing iron and steel. There are now six major steel plants with a capacity of about 87 lakh tonnes. They produced over 66 lakh tonnes of saleable steel during 1978-79. The steel produced by these plants has provided the basis for achieving self-sufficiency in making a number of engineering goods, from a pin to giant machinery. In the field of new industries, agricultural tractors, electronics and fertilizer industries which practically did not exist in 1951, have progressed to such an extent that the import of these products has been brought down to the minimum. The drug industry is also developing fast. The textile industry is no longer confined to the cotton and jute textiles. Today, there are quite a few units producing different types of synthetic fibres. The machine building industry, too, has made rapid strides. The engineering industry can supply virtually the entire requirement of power generating equipment, equipment for railways, road transport and communications. Self-sufficiency has been reached with regard to sugar and cement machinery, power boilers, material handling equipment and a large number of consumer durables.

An important feature of industrial growth in the country after Independence has been the rapid expansion of the public sector. In 1951, there were only five non-departmental public undertakings with an investment of Rs 29 crores. On 31 March 1978, they numbered 153 with an investment of Rs 12,851 crores. These enterprises produce diverse products, such as steel, coal, aluminium, copper, heavy and light engineering products, fertilizers, basic chemicals, drugs minerals, petroleum products, locomotives, aircraft and ships.

PROGRESS AND POLICY

Annual Survey

The provisional summary results for factory sector of the Annual Survey of Industries reveal that the number of registered factories, employing 10 or more workers with the aid of power or employing 20 or more workers without power, has increased from 71,705 in 1975-76 to 81,277 in 1976-77, thereby registering an increase of 13.4 per cent. The other aggregates such as fixed capital productive capital, gross output, inputs and value added also recorded impressive

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

gains from 13 to 15 per cent each during the same period. The total labour force employed by these factories went up from 63.81 lakhs in 1975-76 to 66.49 lakhs in 1976-77, *i.e.*, an increase of 4.2 per cent while the total wage bill increased from Rs 3,463 crores in 1975-76 to Rs 3,637 crores in 1976-77, *i.e.*, by about 5 per cent. The profits acquiring to the entrepreneur went up substantially from Rs 5,139 crores in 1975-76 to Rs 5,860 in 1976-77 thereby recording a gain of 32.6 per cent. This was achieved due to better performance of the public sector undertakings.

According to state-wise analysis of the gross output in 1976-77, Maharashtra continued to remain at the top with a share of 24.3 per cent in the total output. Next come West Bengal (10.9 per cent) followed by Gujarat (10.6 per cent) and Tamil Nadu (10.4 per cent). The other states which contributed sizeably to the total output were Uttar Pradesh (7.0 per cent); Bihar (5.9 per cent); Andhra Pradesh (5.5 per cent); Madhya Pradesh (4.4 per cent) and Karnataka (4.0 per cent). These nine states together accounted for 82.4 per cent of the total output and 82.8 per cent of the total value added.

The first five major industry groups, ranked according to their contribution to net value added, were chemicals and chemical products (12.2 per cent), basic metals and alloys (11.0 per cent), cotton textiles (10.1 per cent) generation of electricity (9.6 per cent), and manufacture of machinery, machine tools excluding electrical and transport equipment (7.8 per cent). These five industry groups taken together accounted for 50.7 per cent of total value added and 45.3 per cent of total gross output originating from the factory sector. From the angle of employment, food products ranked first (17.0 per cent) among all the industries followed by cotton textiles (15.8 per cent), power generation (8.2 per cent), basic metals and alloys (7.3 per cent). According to the contribution to total gross output, food products ranked first with a 15.6 per cent share followed by chemicals and chemical products (15.5 per cent) and basic metal and alloys (10.6 per cent). By far, power generation and basic metals and alloys were the most capital intensive industries accounting 55.4 per cent of the fixed capital stock in the registered sector.

INDUSTRIAL POLICY

Independent India's industrial policy was first announced in 1948. This envisaged a mixed economy with an overall responsibility of the government for planned development of industries and their regulation in the national interest. While it reiterated the right of the State to acquire an industrial undertaking in public interest, it reserved an appropriate sphere for private enterprise. The policy was revised in 1956 following Parliament's acceptance in 1954 of a socialistic pattern of society as the national objective. Under the revised policy, industries specified in Schedule A (enumerated below) are the exclusive responsibility of the State, while industries in Schedule B (also enumerated below) are to be progressively State-owned, but private enterprise is expected to supplement the efforts of the State in these fields. Future development of industries falling outside the two Schedules would, in general, be left to private enterprise. Notwithstanding this demarcation, it is always open to the State to undertake any type of industrial production.

Schedule A Industries : Arms and ammunition and allied items of defence equipment; atomic energy; iron and steel, heavy castings and forgings of iron and steel; heavy plant and machinery required for iron

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

and steel production, for mining, for machine tool manufacture and for such other basic industries as may be specified by the central government; heavy electrical plant including large hydraulic and steam turbines; coal and lignite; mineral oils; mining of iron ore, manganese ore, chrome ore, gypsum, sulphur, gold and diamonds; mining and processing of copper, lead, zinc, molybdenum and wolfram; minerals specified in the Schedule to the Atomic Energy (Control of Production and Use) Order 1953; aircraft; air transport; railway transport; shipbuilding; telephones and telephone cables, telegraph and wireless apparatus (excluding radio receiving sets); generation and distribution of electricity.

Schedule B Industries : All other minerals except 'minor minerals' as defined in Section 3 of the Minerals Concession Rules, 1949; aluminium and other non-ferrous metals not included in Schedule A; machine tools; ferro-alloys and tool steel; basic and intermediate products required by chemical industries, such as, the manufacture of drugs, dyestuffs and plastics; antibiotics and other essential drugs; fertilizer; synthetic rubber; carbonisation of coal; chemical pulp; road transport and sea transport.

Regulation of Industry

In line with the policy first announced in 1948, the Constitution was amended and the Industries (Development and Regulation) Act, 1951 was enacted. Under this, industries listed in the first Schedule to the Act are required to be licensed by the government. The Act also authorises the government to examine the working of any such industrial undertaking and to issue directions which it considers necessary. If the undertaking continues to be mismanaged, the government is empowered to take over its management or control. The Act empowers the government to secure equitable distribution and fair prices of any article produced by the scheduled industries.

Industrial Licensing

An important objective of the industrial policy is to prevent the emergence of private monopolies and the concentration of economic power in the hands of a small number of individuals. The problem was studied by the Mahalanobis Committee on Distribution of Income and Levels of Living (1960), the Monopolies Enquiry Commission (1964), and the Industrial Licensing Policy Inquiry Committee (ILPIC) (1967). The Administrative Reforms Commission and the Planning Commission also made various recommendations. As a result, the Monopolies and Restrictive Trade Practices (MRTP) Act was passed in 1969 and under the Act the Monopoly and Restrictive Trade Practices Commission was appointed in 1970. The Industrial Licensing Policy was modified in 1970 and against in 1973.

The latest modifications reaffirmed that the industrial Policy Resolution of 1956 would continue to govern government's policies in the industrial sphere. All industries of basic and strategic importance, or in the nature of public utility services would continue to be in the public sector. Industries which are essential and require investment on a scale, which only the State in the present circumstances could provide, would also be in the public sector. Some other salient features of the new changes are :

A large industrial house for licensing purposes would mean a house having assets, along with assets of inter-connected undertakings (as defined in the MRTP Act, 1969), of not less than Rs 20 crores as against assets exceeding Rs 35 crores provided by the ILPIC.

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

The list of industries, which are open for larger industrial houses and foreign concerns and subsidiaries and branches of foreign companies along with other applicants, has been consolidated. They cannot, however, participate in the production of any item reserved for the public sector as mentioned in Schedule A or the small-scale sector. The consolidated list covers 19 groups, *viz.*, 1. metallurgical industries : (i) ferro-alloys, (ii) steel castings and forgings, (iii) special steels and (iv) non-ferrous metals and their alloys; 2. boilers and steam generating plants; 3. prime movers (other than electrical generators) : (i) industrial turbines, and (ii) internal combustion engines; 4. electrical equipment : (i) equipment for transmission and distribution of electricity, (ii) electrical motors, (iii) electrical furnaces, (iv) X-ray equipment, and (v) electronic components and equipment; 5. transportation : (i) mechanised sailing vessels up to 1,000 dwt, (ii) ship ancillaries, and (iii) commercial vehicles; 6: industrial machinery; 7. machine tools; 8. agricultural machinery, tractors and power tillers; 9. earthmoving machinery; 10. industrial instruments, indicating, recording and regulating devices for pressure temperature, rate of flow, weights levels and the like; 11. scientific instruments; 12. nitrogenous and phosphatic fertilizers falling under inorganic fertilizers under '18 Fertilizers' in the First Schedule to the I D & R Act, 1951; 13. chemicals (other than fertilizers) : (i) inorganic heavy chemicals, (ii) organic heavy chemicals, (iii) fine chemicals, including photographic chemicals, (iv) synthetic resins and plastics, (v) synthetic rubbers, (vi) man-made fibres, (vii) industrial explosives, (viii) insecticides, fungicides, weedicides and the like, (ix) synthetic detergents and (x) miscellaneous chemicals (for industrial use only); 14. drugs and pharmaceuticals; 15. paper and pulp including paper products; 16. automobile tyres and tubes; 17. plate glass; 18. ceramic : (i) refractories, and (ii) furnace lining bricks—acidic, basic and neutral; and 19. cement products : (i) portland cement and (ii) asbestos cement.

The larger industrial houses would ordinarily be excluded from the industries not included in the 19 groups except where production is predominantly for exports. The minimum export obligation in such cases is to be at least 60 per cent of the additional production (75 per cent in the case of industries normally reserved for small-scale units). The investment of foreign concerns would continue to be subjected to the guidelines on the dilution of 'foreign equity' and would be examined with special reference to technological aspects, export possibilities and the overall effect on the balance of payments.

Competent small and medium entrepreneurs would be preferred *vis-a-vis* the larger industrial houses and foreign concerns in the setting up of new capacity. Licensing policy would seek to promote production of ancillaries in the medium or small-scale sector. Co-operative and small and medium entrepreneurs are to be encouraged to participate in the production of mass consumption goods. Other investors would be allowed to participate only if there are special factors, such as, sizeable economies of scale resulting in reduced prices, technological improvements, large investment requirement substantial export possibilities or as part of modernisation. The co-operative sector would also get preference in the licensing of industries which process agricultural raw materials, such as, sugarcane, jute, cotton or agricultural inputs, such as, fertilizers.

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

The policy of reservation for the small-scale sector (involving investment in machinery and equipment up to Rs 10 lakhs) and ancillary industries (involving investment in plant and equipment up to Rs 15 lakhs) has been continued. The government has extended the area of reservation to 807 industries for this sector keeping in view its performance and potentialities.

The exemption limit for licensing purposes, has been raised up to Rs 3 crores by way of fixed assets in land, buildings and machinery. This exemption would not apply to existing licensed or registered undertakings having fixed assets exceeding Rs 5 crores, larger industrial houses, dominant undertakings and to foreign companies including their branches and subsidiaries.

Each proposal for establishing a joint sector project would be judged and decided on its merits in the light of government's social and economic objectives. The undertakings coverd by the MRTP Act would not be allowed to use the device of joint sector projects for entry in industries from which they are otherwise precluded. The government would also ensure for itself an effective role in guiding policies, management and operation of joint sector companies.

Liberalisation of Licensing Policy

In pursuance of the liberalised licensing policy, the government decided to exempt from the normal industrial licensing procedure medium entrepreneurs to enable them to set up industrial capacities based on indigenous equipment and local raw materials and also to utilise to a fuller extent the existing installed capacities. Accordingly, 24 medium industries were exempted from the licensing provisions for setting up a new undertaking, substantial expansion of the existing capacity and manufacture of new articles.

Another 29 medium sector industries were allowed fuller utilisation of the installed capacities. This was done with the twin objectives of containing inflation and increasing production in key and important industries.

To liberalise investment procedure, powers have been delegated to administrative ministries to dispose of certain types of applications including those for diversification, carry-on-business licences and extension of validity period of letters of intent or industrial licences.

Fifteen selected engineering industries, particularly export oriented ones, have been allowed to grow at the rate of 5 per cent per annum or up to a ceiling of 25 per cent in a plan period in one or more steps, over their licensed capacity.

With a view to utilising full installed capacity, diversification has been allowed in industrial machinery, machine tools, electrical equipment, steel castings, steel forgings, steel pipes, passenger cars and power driven two-wheeler industry within the overall licensed capacity of a particular industrial undertaking.

A technical development cell has been set up in the Ministry of Industry to promote full utilisation of capacity to enhance export development efforts. A technical development fund has also been created to cover the foreign exchange needs for import of equipment having an impact on quality and quantity output, technical know-how, foreign consultancy services and import of drawing and designs.

To encourage commercial exploitation of technology developed by national laboratories, industrial undertakings, other than those falling within the purview of the Monopolies and Restrictive Trade Practices Act and Foreign Exchange Regulation Act, can set up

 CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

capacities based on technology developed by any of the laboratories established by the CSIR and laboratories approved by the Department of Science and Technology without obtaining an industrial licence.

Non-residents of Indian origin have been allowed facilities to import plant and machinery for the establishment of industrial projects in India from their own savings in foreign exchange. These facilities have been liberalised so as to attract remittance and investment in industries in the priority and the export oriented sectors.

STANDARDISATION

National standards for commodities, materials and processes are laid down by the Indian Standards Institution (ISI) which was set up in New Delhi in 1946. It also promotes standardisation and quality control in industrial technology and imparts training in standardisation techniques to Indian and foreign company executives and technical personnel. The number of standards in force as on 30 November 1979 was 10,134.

The Institution also operates the ISI Certification Mark Scheme under which licences are issued to manufacturers for applying the certification mark on their products as a third party guarantee about their quality. The number of licences issued for the use of certification mark on products as on 30 November 1979 was 5,216.

The Institution represents India on the International Organisation for Standardisation and International Electrotechnical Commission.

INDUSTRIAL FINANCE

Institutional finance for industries is provided by several term-lending institutions both at the all-India level as well as the state-level. The institutions which supply industrial finance are described below :

IFCI

The Industrial Finance Corporation of India (IFCI), which was established under an Act of Parliament in 1948 and is now a subsidiary of the Industrial Development Bank of India, provides long-term loan assistance to industrial concerns, both in the public and private sectors. The Corporation also provides training in modern management techniques to its clients. From its inception and up to 30 June 1979, the total net financial assistance sanctioned and disbursed by IFCI amounted to Rs 907.00 crores and Rs 676.13 crores respectively.

SFCs

Eighteen state financial corporations including the Tamil Nadu Industrial and Investment Corporation, supply industrial finance to medium and small-scale sectors. The total loans sanctioned by them during 1978-79 amounted to Rs 195.3 crores as against Rs 163.30 crores during 1976-77. The total loans sanctioned by the corporations since inception and up to March 1979 aggregated to Rs 1,268.5 crores.

IDBI

The Industrial Development Bank of India (IDBI) was set up in 1964 to co-ordinate the activities of other financial institutions (including banks), supplement their resources to plan and promote industries of key significance to the industrial structure and to adopt and enforce a system of priorities in promoting future industrial growth. In order to enlarge the role of the IDBI as the apex financial institution and to achieve more effective co-ordination among all financial institutions in the country, IDBI was delinked from the Reserve Bank of India and made an autonomous corporation owned by the Government of India with effect from 16 February 1976.

The main thrust of the Bank in the future, would be that of an innovator imparting new directions in the sphere of industrial finance.

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

The principal functions and operations of the Bank have been entrusted to three separate wings—the domestic finance wing, the international finance wing and the small and village industries wing. The former handles all aspects of domestic project assistance, including selection and scrutiny, financing and follow-up and the latter offers improved and wider financial and advisory services to engineering exporters and functions in fact, as an Export Bank. This wing also handles foreign lines of credit such as those from the International Development Association made available to the IDBI for financing industrial development. The third wing is to promote the growth of small and village industries.

The emphasis is on the programmes that result in assistance to small and new entrepreneurs and to enterprises located in relatively under developed regions, projects which use indigenous technology and have greater employment potential; projects which earn or save foreign exchange; and all other projects accorded priority in our national programmes for economic development in order to expedite assistance to these priority areas, the IDBI has effected substantial decentralisation of the Bank's operations. The IDBI has regional offices at Ahmedabad, Calcutta, Gauhati, Madras and New Delhi apart from 11 branch offices in various states.

The Bank had sanctioned up to 30 June 1979 financial assistance (excluding guarantees) totalling Rs 4,130.7 crores, of which Rs 2,776.9 crores had been disbursed.

ICICI

The Industrial Credit and Investment Corporation of India (ICICI) was set up in 1955. From its inception and upto 30 September 1979, the total amount sanctioned (net) and disbursed was Rs 1,219.87 crores and Rs 881.98 crores respectively.

IRCI

The Industrial Reconstruction Corporation of India (IRCI), which was set up in 1971, is mainly concerned with the revival and revitalisation of industrial units which have closed down or are facing closure but show promise of viability by reconstruction of share capital, strengthening of management, provision of finance on soft terms, improvement in technology and labour relations. Upto 30 June 1978, IRCI had sanctioned loan assistance of Rs 64.60 crores.

NIDC

The National Industrial Development Corporaiton (NIDC) was set up in 1954 for the rehabilitation and modernisation of cotton textile and jute industries and for the expansion of machine tool units. It is providing engineering consultancy services both at home and abroad. The Corporation's consultancy services are being increasingly utilised by developing countries like Iran, Kenya, Libya, Malaysia, Nepal, Tanzania, the Gulf States and also by a developed country, Italy. The United Nations Industrial Development Organisation and some private parties in UK have also given assignments to NIDC. Its foreign exchange earnings totalled Rs 50 lakhs during 1977-78.

UTI

The Unit Trust of India (UTI), was established in 1964 as a public sector investment institution for mobilising the savings of the community and channelising them into productive corporate investments so as to provide for the growth and diversification of the economy.

To achieve this, UTI sells 'Units' of the denomination of Rs. 10 to public to provide an opportunity to investors, particularly those belong

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

ing to small and medium income groups indirectly to participate in the ownership of shares and debentures of joint stock companies. For this purpose UTI has formulated three schemes for selling 'Units', namely Unit Scheme 1964, Unit Scheme 1971 and Unit Scheme 1976. In order to cater to specific investment needs of different types of investors, UTI framed specific savings plans linked to the Unit Schemes, *viz.*, Reinvestment Plan 1966, Children's Gift plan 1970 and Unit-Linked Insurance Plan 1971.

FOREIGN CAPITAL

To supplement the capital resources and know-how for rapid industrial development, the Government of India allows foreign assistance in desirable cases. The policy in regard to foreign capital is governed by the Industrial Policy Resolution of 1948 and the Prime Minister's statement in the Constituent Assembly in 1949. Under this, the government's policy towards foreign investment is highly selective and aims at filling technological gaps and expanding exports. Foreign capital is not permitted in the fields of banking, commerce, finance, plantations, trading, consumer and high profit yielding industries.

Under section 29 of the Foreign Exchange Regulation Act, 1973, companies incorporated abroad and Indian companies having more than 40 per cent non-resident interest are required to obtain fresh permission of the Reserve ank of India to carry on their existing business activities in India.

According to the guidelines issued by the Government, branches of foreign companies would be required to convert into Indian companies with foreign holdings ranging from 40 per cent, 51 per cent and 74 per cent. The Indian companies with more than 40 per cent non-resident interest would also be required to reduce the foreign holdings to 74 per cent or 51 per cent or 40 per cent depending upon the nature of business activities.

DEVELOPMENT OF INDUSTRIES

The history of organised industry in India may be traced to 1854 when the real beginning of the cotton mill industry was made in Bombay with predominantly Indian capital and enterprise. The foundations of jute industry were laid near Calcutta in 1855, mostly with foreign capital and enterprise. Coal-mining also progressed about this time. These were the only major industries which had developed substantially before the First World War. During and after World Wars I and II, a somewhat more liberal policy was adopted by the authorities, such as, a discriminating protection policy, which gave impetus to industrial development. Several industries rapidly expanded and a number of new industries came up, such as, steel, sugar, cement, glass, industrial chemicals, soap, vanaspati and some branches of engineering. But their production was neither adequate in quantity for meeting even the low level of internal demand nor diversified in character.

Progress First and Second Plans

During the First and Second Five Year Plans (1951-52 to 1960-61), the growth and diversification of industry were remarkable, particularly in the Second Plan. Three new steel plants, each of 10 lakh ingot tonnes capacity, were set up in the public sector and the capacity of the two existing steel works in the private sector was doubled. Foundations were laid of heavy electrical and heavy machine tools industries and heavy machine building and other branches of heavy engineer-

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

ing industries. The production of machinery for cement and paper industries was started for the first time. In chemical industries the advance was on a wide front, leading not only to large units and greatly increased output of basic chemicals, such as, nitrogenous fertilizers, caustic soda, soda ash and sulphuric acid, but also in the manufacture of a number of new products like urea, ammonia phosphate, penicillin, synthetic fibres, industrial explosives, polythylene and dyestuffs. The output of many other industries like bicycles, sewing machines, telephone and electrical goods, increased substantially. New skills were learnt by the workers and a large and growing class of industrial managers came into being. Organised industrial production practically doubled in these ten years; the index of industrial production rose from 100 in 1950-51 to 194 in 1960-61. New industrial townships and factories sprang up in the environs of the main cities of the country.

At the same time, there were some large shortfalls. The combined output of the new steel plants was only 6 lakh tonnes in 1960-61 as against the target of 20 lakh tonnes. The expansion of the government-owned Sindri Fertilizer Factory and the private sector ammonium chloride project at Varanasi were completed 12 to 18 months after the scheduled dates. The three fertilizer plants in the public sector at Nangal, Neyveli and Rourkela and the heavy electrical project at Bhopal were delayed, mainly due to foreign exchange difficulties. The heavy machinery, the mining machinery and the foundry forge projects, which should have been far advanced, began to yield some output only at the end of the Third Plan.

Targets of capacity and production in most cases were, however, fulfilled, and in some cases, for example, power-driven pumps, diesel engines, electric motors, electric fans, radio receivers and sugar, the targets were exceeded.

Dispersal of industry was affected by giving preference in location of public sector projects of relatively backward areas whenever possible. Similarly, in the licensing of private sector projects, the claims of under-developed regions were kept in view.

Third Plan and Annual Plans

Industrial progress was markedly uneven during the eight years which comprised the Third Plan (1961-66), and the subsequent Annual Plans (1966-69). In the first four years, conditions were relatively favourable for industrial investment and growth and the progress achieved was significant. Thereafter, for nearly three years the economy was subjected to considerable stress and strain and the growth rate in industrial production declined, first slowly and then steeply, till it reached virtual stagnation. But in the last year of this period, 1968-69, there were distinct signs of recovery.

These vicissitudes may be illustrated with reference to the index of industrial production. The increase in industrial output (1960 as base) was 11.3 per cent in 1961-62, 9.5 per cent in 1962-63, 9.3 per cent in 1963-64 and 8.8 per cent in 1964-65. Thereafter, there was a sharp deterioration in the rate of growth of output. It fell to 5.3 per cent in 1965-66, 0.6 per cent in 1966-67 and 1.6 per cent in 1967-68. The decline in these years was mainly due to low rates of growth in textiles and food industries, on the one hand, and metals and machinery industries on the other. Industrial production, however, showed a sharp recovery during 1968-69 with a rise of 6.8 per cent.

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

The decline in industrial growth after 1964-65 was attributable to several factors, of which the most important were the series of dislocations caused by the hostilities in 1965 and two successive droughts in 1965-66 and 1966-67. Many industries were severely affected by the shortage of raw materials and components arising from the pause in external aid in 1965.

Among industries in which Third Plan production targets were fully or nearly realised by 1965-66, were aluminium, automobiles electric transformers, cotton textile machinery, machine tools, sugar, jute textiles, power-driven pumps, diesel engines and petroleum products. On the other hand, in some of the important industries like steel and fertilizers, there was a considerable shortfall in production. In subsequent years, there was a step-up in production in certain industries such as fertilizers, heavy chemicals, cement and petroleum products. All the same, the Third Plan targets for steel and fertilizers were not realised even by 1968-69, the output of finished steel being 47 lakh tonnes in 1968-69 against the Third Plan target of 68 lakh tonnes and of introgenous fertilizers being 5,41,000 tonnes against an expected 8,00,000 tonnes.

In spite of this uneven performance, significant achievements contributing towards the realisation of diversified industrial structure were made during this period. Substantial capacity was created in many new lines. Several of the large projects launched at the commencement of the Third Plan were completed and brought into production. In particular, in the field of heavy engineering and machine-building industries, the commencement of production of the different units in the Heavy Engineering Corporation, Mining and Allied Machinery Corporation and of heavy electrical projects made it possible, largely through indigenous efforts, the expansion of further capacity in vital sectors like iron and steel, mining and power generation. In the field of rail and road transport and communications, virtual self-sufficiency for the supply of equipment and rolling stock was achieved. Machinery manufacturing capacity for a variety of traditional industries like textiles, sugar and cement was developed and design and engineering capabilities were expanded. Process technology was either acquired or developed to enable the planning, designing and construction of industrial projects with maximum indigenous efforts in fields like fertilizers, rayon and dissolving pulp. There was an appreciable increase in the production capacity of steel and non-ferrous metals. Progress was made in the expansion of capacity in petroleum, fertilizer and petro-chemical industries.

Fourth Plan

In the Fourth Plan, the performance of the industrial sector fell short of expectations both in terms of production and investment. Industrial production, which was expected to achieve an annual growth rate of 8 to 10 per cent during the Plan period on the basis of the proposed investment—Rs 3,505 crores in the public sector and Rs 2,250 crores in the private sector—was : 7.3 per cent (1969-70); 3.1 per cent (1970-71); 4.8 per cent (1971-72); 4.0 per cent (1972-73(and 2.2 per cent (1973-74). The investment on industrial development in the public sector was estimated to be about Rs 2,700 crores as against the provision of Rs 3,050 crores. While the pace of investment in some of the sectors like iron ore, petroleum and petro-chemicals was generally satisfactory, this was not so in respect of other sectors like iron

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

ing industries. The production of machinery for cement and paper industries was started for the first time. In chemical industries the advance was on a wide front, leading not only to large units and greatly increased output of basic chemicals, such as, nitrogenous fertilizers, caustic soda, soda ash and sulphuric acid, but also in the manufacture of a number of new products like urea, ammonia phosphate, penicillin, synthetic fibres, industrial explosives, polythylene and dyestuffs. The output of many other industries like bicycles, sewing machines, telephone and electrical goods, increased substantially. New skills were learnt by the workers and a large and growing class of industrial managers came into being. Organised industrial production practically doubled in these ten years; the index of industrial production rose from 100 in 1950-51 to 194 in 1960-61. New industrial townships and factories sprang up in the environs of the main cities of the country.

At the same time, there were some large shortfalls. The combined output of the new steel plants was only 6 lakh tonnes in 1960-61 as against the target of 20 lakh tonnes. The expansion of the government-owned Sindri Fertilizer Factory and the private sector ammonium chloride project at Varanasi were completed 12 to 18 months after the scheduled dates. The three fertilizer plants in the public sector at Nangal, Neyveli and Rourkela and the heavy electrical project at Bhopal were delayed, mainly due to foreign exchange difficulties. The heavy machinery, the mining machinery and the foundry forge projects, which should have been far advanced, began to yield some output only at the end of the Third Plan.

Targets of capacity and production in most cases were, however, fulfilled, and in some cases, for example, power-driven pumps, diesel engines, electric motors, electric fans, radio receivers and sugar, the targets were exceeded.

Dispersal of industry was affected by giving preference in location of public sector projects of relatively backward areas whenever possible. Similarly, in the licensing of private sector projects, the claims of under-developed regions were kept in view.

Third Plan and Annual Plans

Industrial progress was markedly uneven during the eight years which comprised the Third Plan (1961-66), and the subsequent Annual Plans (1966-69). In the first four years, conditions were relatively favourable for industrial investment and growth and the progress achieved was significant. Thereafter, for nearly three years the economy was subjected to considerable stress and strain and the growth rate in industrial production declined, first slowly and then steeply, till it reached virtual stagnation. But in the last year of this period, 1968-69, there were distinct signs of recovery.

These vicissitudes may be illustrated with reference to the index of industrial production. The increase in industrial output (1960 as base) was 11.3 per cent in 1961-62, 9.5 per cent in 1962-63, 9.3 per cent in 1963-64 and 8.8 per cent in 1964-65. Thereafter, there was a sharp deterioration in the rate of growth of output. It fell to 5.3 per cent in 1965-66, 0.6 per cent in 1966-67 and 1.6 per cent in 1967-68. The decline in these years was mainly due to low rates of growth in textiles and food industries, on the one hand, and metals and machinery industries on the other. Industrial production, however, showed a sharp recovery during 1968-69 with a rise of 6.8 per cent.

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

The decline in industrial growth after 1964-65 was attributable to several factors, of which the most important were the series of dislocations caused by the hostilities in 1965 and two successive droughts in 1965-66 and 1966-67. Many industries were severely affected by the shortage of raw materials and components arising from the pause in external aid in 1965.

Among industries in which Third Plan production targets were fully or nearly realised by 1965-66, were aluminium, automobiles electric transformers, cotton textile machinery, machine tools, sugar, jute textiles, power-driven pumps, diesel engines and petroleum products. On the other hand, in some of the important industries like steel and fertilizers, there was a considerable shortfall in production. In subsequent years, there was a step-up in production in certain industries such as fertilizers, heavy chemicals, cement and petroleum products. All the same, the Third Plan targets for steel and fertilizers were not realised even by 1968-69, the output of finished steel being 47 lakh tonnes in 1968-69 against the Third Plan target of 68 lakh tonnes and of introgenous fertilizers being 5,41,000 tonnes against an expected 8,00,000 tonnes.

In spite of this uneven performance, significant achievements contributing towards the realisation of diversified industrial structure were made during this period. Substantial capacity was created in many new lines. Several of the large projects launched at the commencement of the Third Plan were completed and brought into production. In particular, in the field of heavy engineering and machine-building industries, the commencement of production of the different units in the Heavy Engineering Corporation, Mining and Allied Machinery Corporation and of heavy electrical projects made it possible, largely through indigenous efforts, the expansion of further capacity in vital sectors like iron and steel, mining and power generation. In the field of rail and road transport and communications, virtual self-sufficiency for the supply of equipment and rolling stock was achieved. Machinery manufacturing capacity for a variety of traditional industries like textiles, sugar and cement was developed and design and engineering capabilities were expanded. Process technology was either acquired or developed to enable the planning, designing and construction of industrial projects with maximum indigenous efforts in fields like fertilizers, rayon and dissolving pulp. There was an appreciable increase in the production capacity of steel and non-ferrous metals. Progress was made in the expansion of capacity in petroleum, fertilizer and petro-chemical industries.

Fourth Plan

In the Fourth Plan, the performance of the industrial sector fell short of expectations both in terms of production and investment. Industrial production, which was expected to achieve an annual growth rate of 8 to 10 per cent during the Plan period on the basis of the proposed investment—Rs 3,505 crores in the public sector and Rs 2,250 crores in the private sector—was : 7.3 per cent (1969-70); 3.1 per cent (1970-71); 4.8 per cent (1971-72); 4.0 per cent (1972-73 (and 2.2 per cent (1973-74). The investment on industrial development in the public sector was estimated to be about Rs 2,700 crores as against the provision of Rs 3,050 crores. While the pace of investment in some of the sectors like iron ore, petroleum and petro-chemicals was generally satisfactory, this was not so in respect of other sectors like iron

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

and steel, non-ferrous metals, fertilizers and coal. In fact, the shortfall in overall investment was much larger, if account was taken of the escalation in project costs.

A number of factors were responsible for the unsatisfactory growth in industrial production. While in some of the critical industries steel and fertilizers, production remained substantially below the installed capacity on account of operational problems in different units, other agro-based industries like sugar and textiles showed an erratic trend. The inadequate pace of investment resulted in a reduced demand for industrial machinery, adversely affecting the level of output of the capital goods industries. Production in other engineering industries was also hit by the shortage of steel and non-ferrous metals.

On the positive side, there was a substantial production increase in several industries like alloys and special steels, aluminium, automobile tyres, petroleum refinery products, electronics, machine tools, tractors and heavy electrical equipment. The production in the public sector undertakings also showed an encouraging rise towards the closing years of the Plan. Apart from this, the industrial base was further expanded and a greater degree of sophistication and self-reliance achieved.

Fifth Plan

The Fifth Plan laid emphasis on rapid growth of core sector industries and increase in the production of export-oriented goods and articles of mass consumption. The average rate of growth of industrial sector was estimated at 7 per cent per annum in the revised plan. The sharp increase in the prices of food-grains, fertilizers and oil seriously upset the assumptions on which the draft Fifth Plan had been framed. These new developments also lent urgency to a time-bound programme of action in order to achieve a measure of self-reliance in food and energy. The successive Annual Plans had to be formulated on the basis of these considerations.

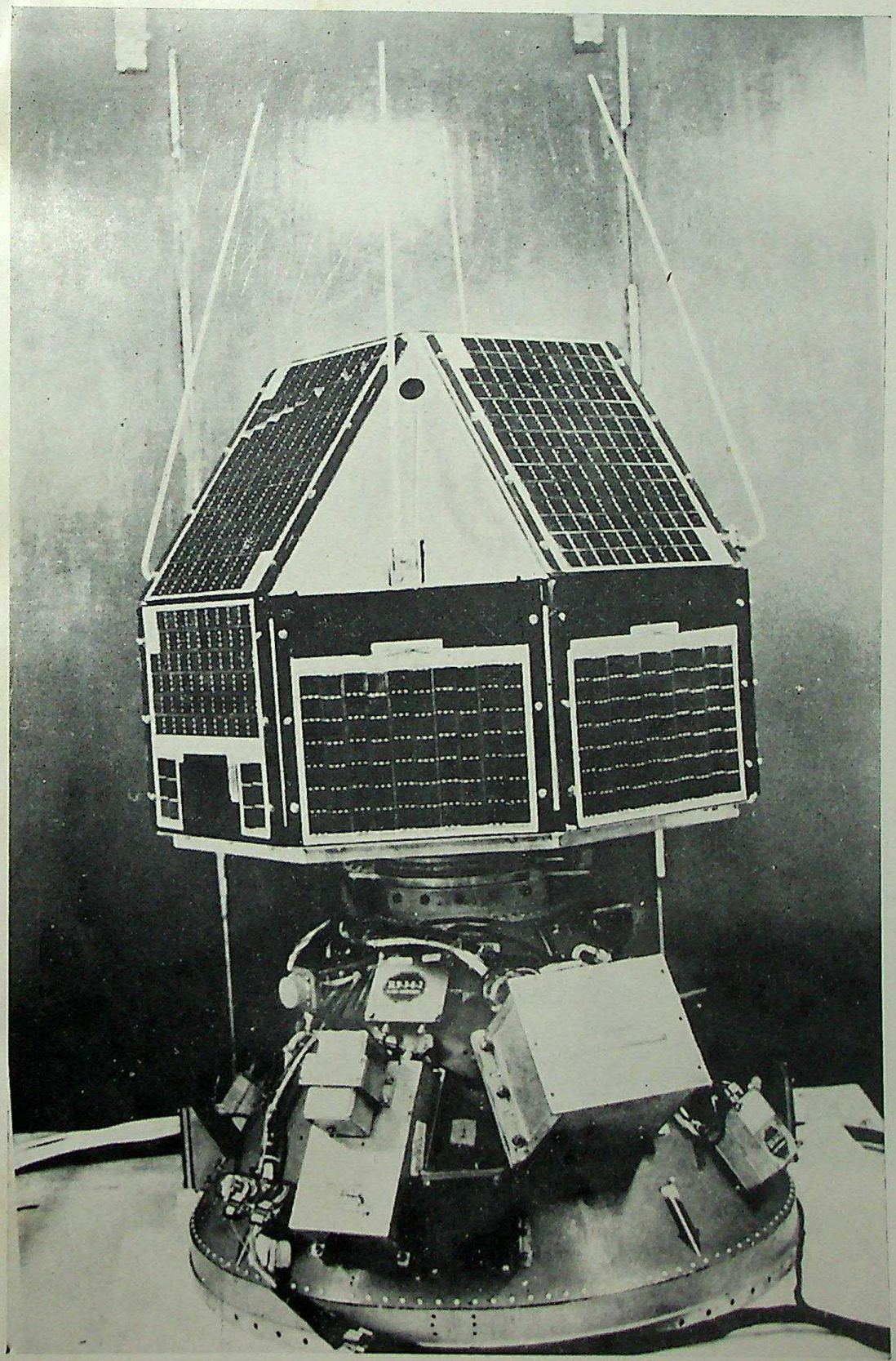
The draft Fifth Five Year Plan (1974—79) envisaged a total outlay of Rs 53,441 crores, comprising Rs 37,160 crores for public sector and Rs 16,144 crores for private sector respectively. However, due to the emergence of an unprecedented inflationary situation as a result of a steep increase in oil prices in November 1973, the Plan had to be drastically modified in 1976. The revised plan envisaged a total outlay of Rs 69,351 crores comprising Rs 42,303 crores for public sector and Rs 27,048 crores for the private sector respectively. The public sector outlay included Rs 3,000 crores as investment on inventories. The remaining public-sector outlay of Rs 39,303 crores included fresh investments of Rs 36,703 crores and Rs 2,600 crores as current outlay. The private sector out-lay had been raised from Rs 16,000 crores in the draft plan to Rs 27,000 crores in the revised plan.

Of the revised public-sector outlay of Rs 39,322 crores during the Fifth Plan, the share of industries and minerals sector amounted to Rs 7,362 crores or 18.7 per cent of the total outlay. The outlay for large and medium industries was Rs 6,852 crores and that of village and small industries Rs 510 crores.

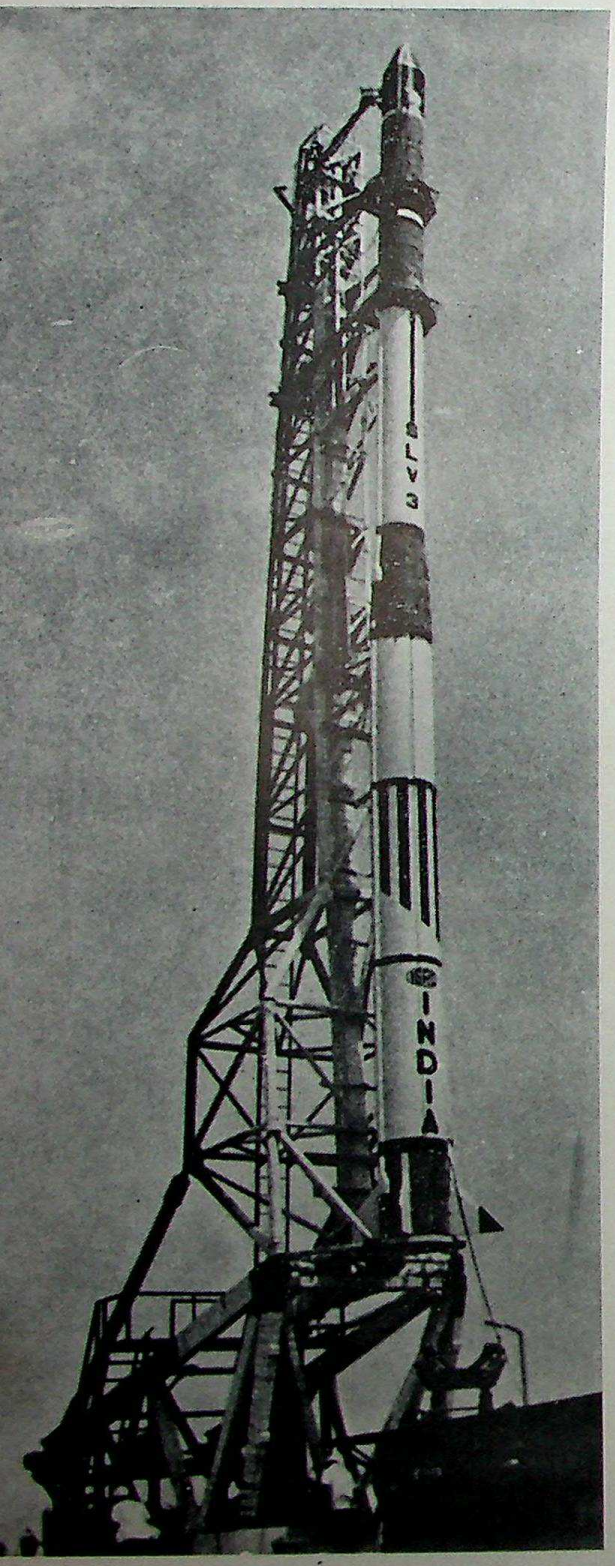
As against an average rate of growth of industrial production of 7 per cent envisaged during the Fifth Plan, the actual rate of growth achieved during the first four years of the Fifth Plan was : 2.6 per cent for 1974-75; 6 per cent for 1975-76; 9.5 per cent for 1976-77 and 3.9 per cent for 1977-78.

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

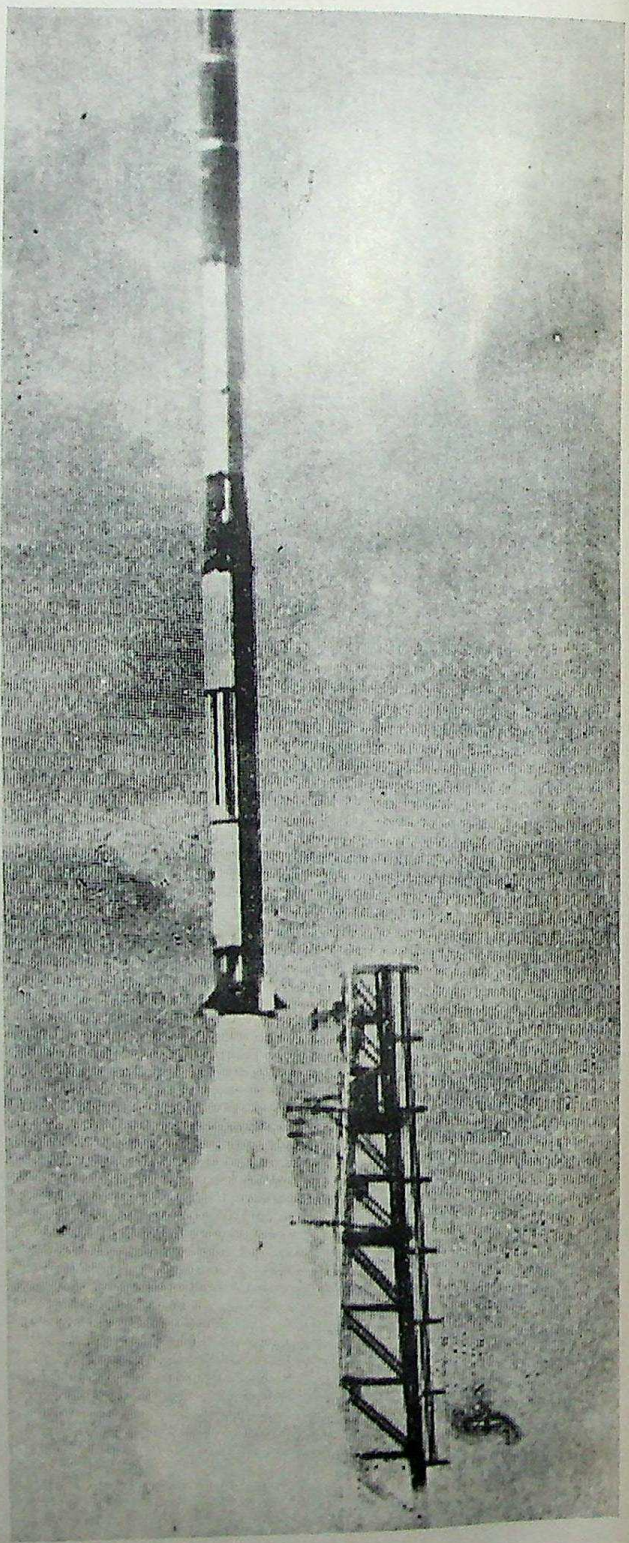
India joins the space club. Rohini-I, an entirely home-built satellite lifted off by SLV-3, a completely indigenous four-stage rocket, went into orbit on 18 *July* 1980.



CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

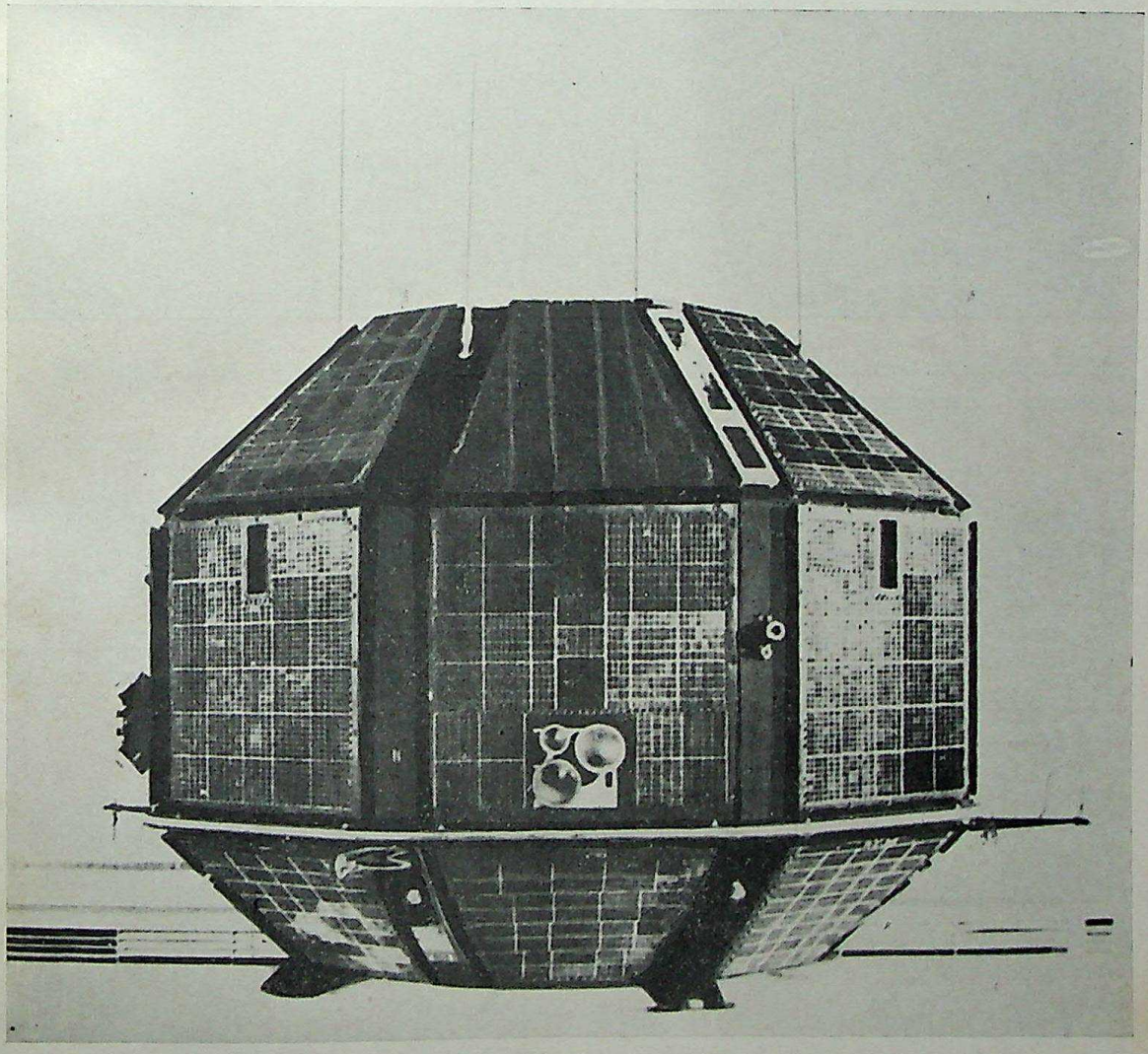


SLV-3 on the launching pad



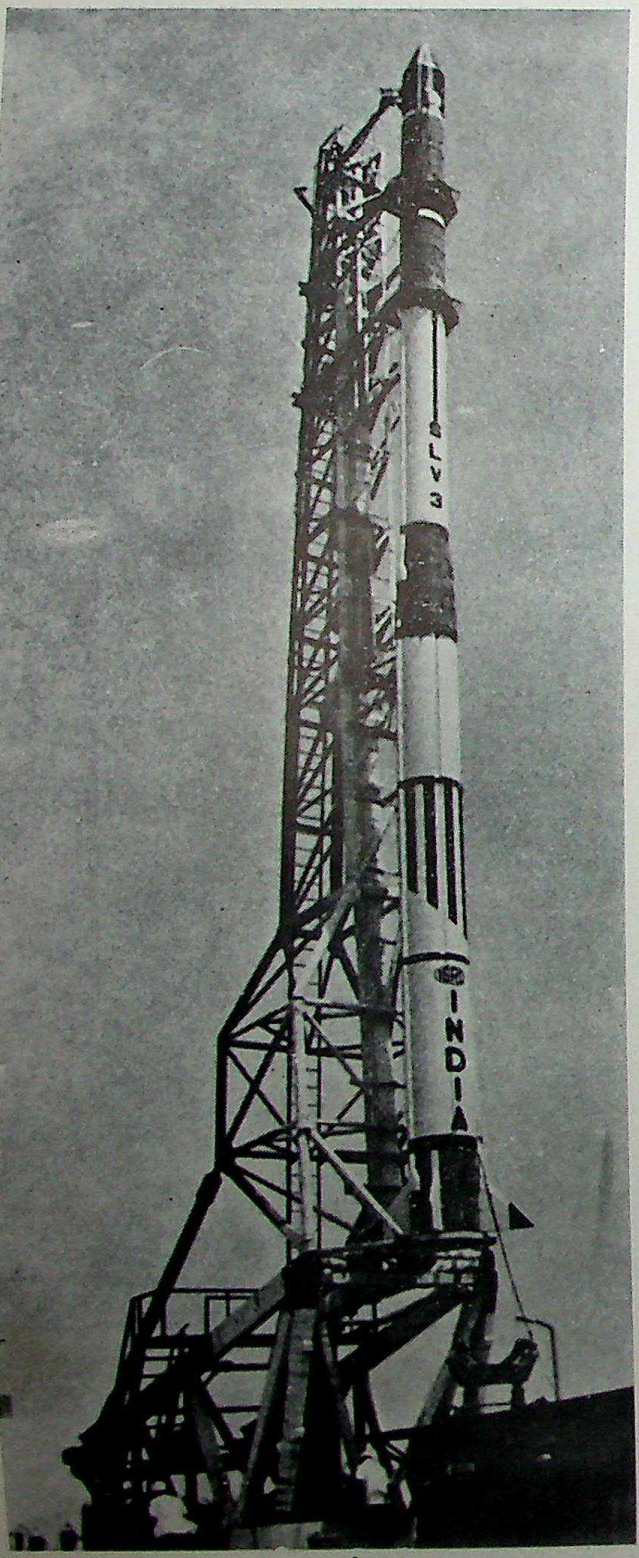
SLV-3 zooms into space with its payload, Rohini-I satellite

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

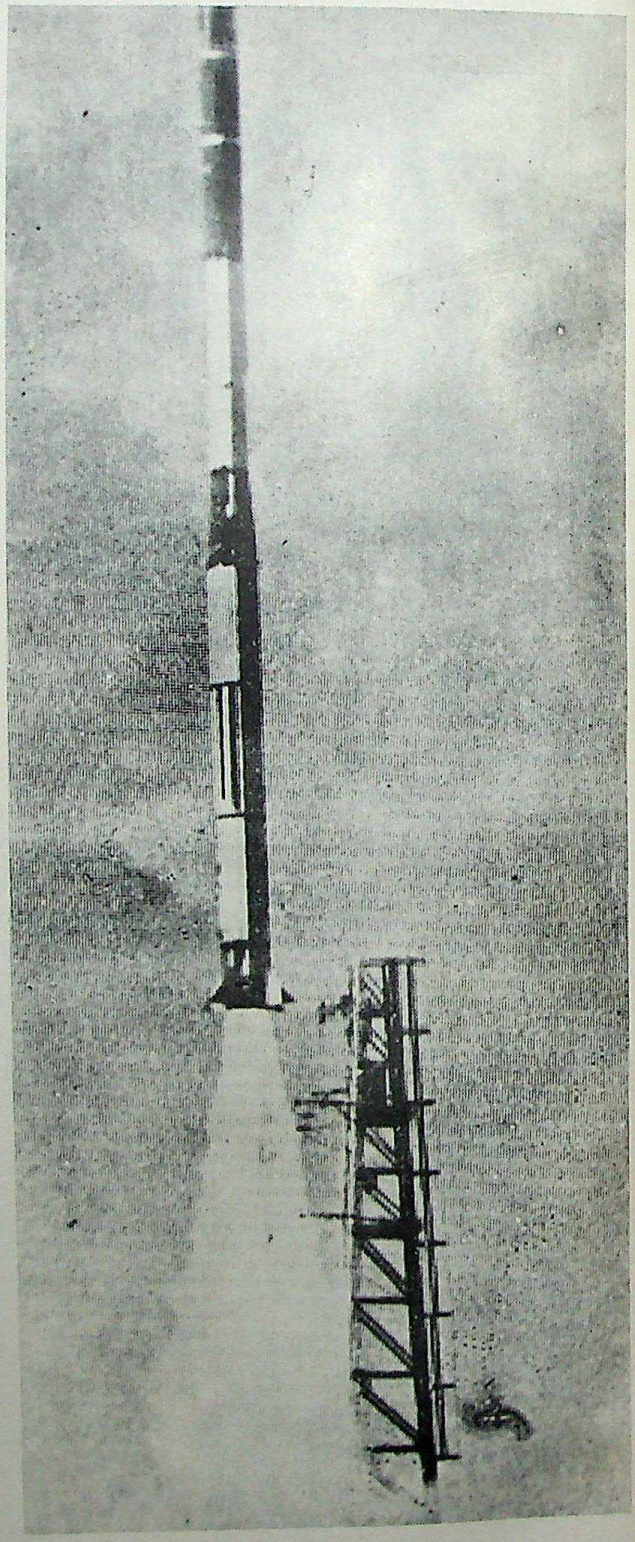


The Satellite 'Bhaskara' launched on 7 June 1979 from a Russian Cosmodrome

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

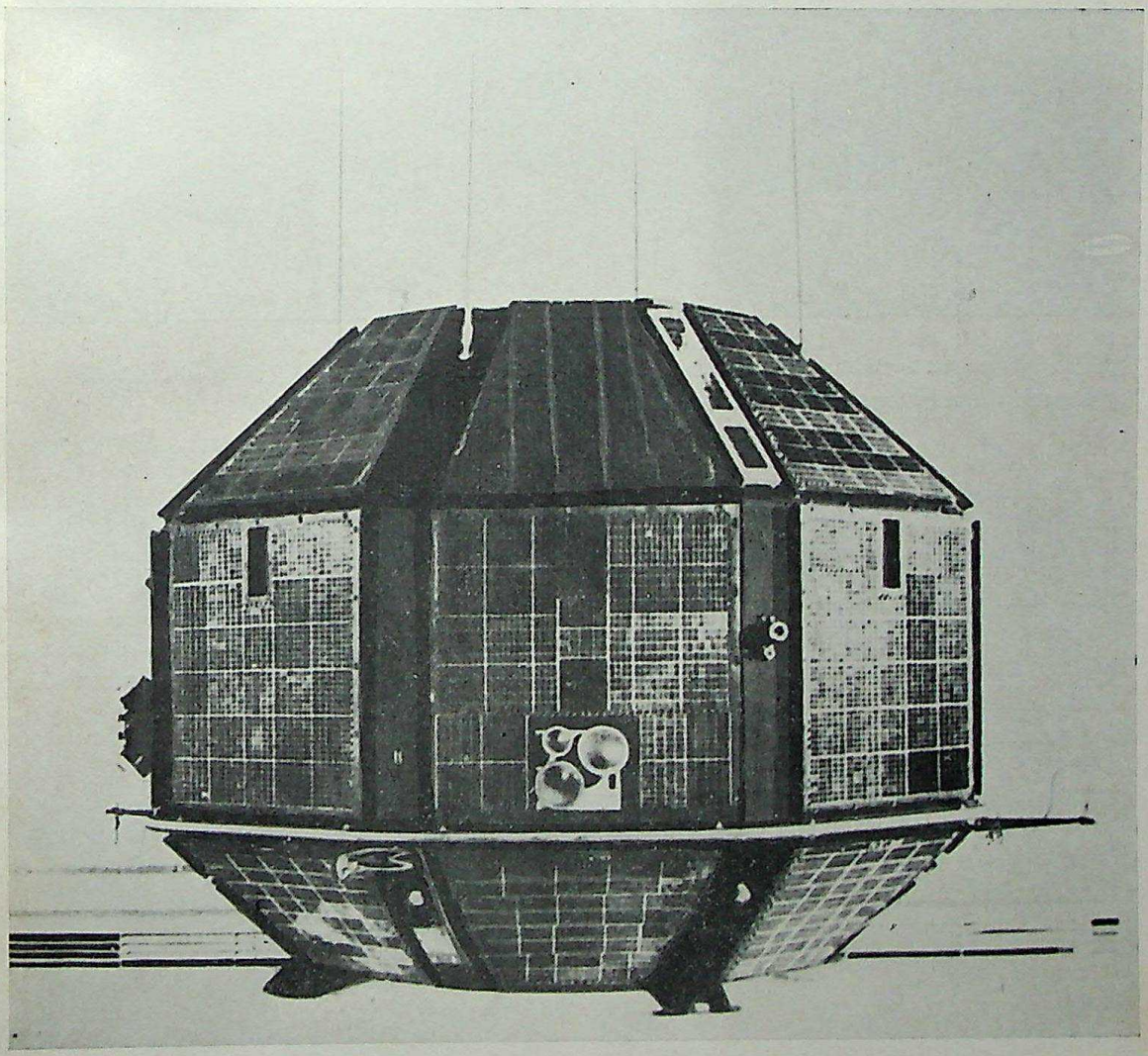


SLV-3 on the launching pad



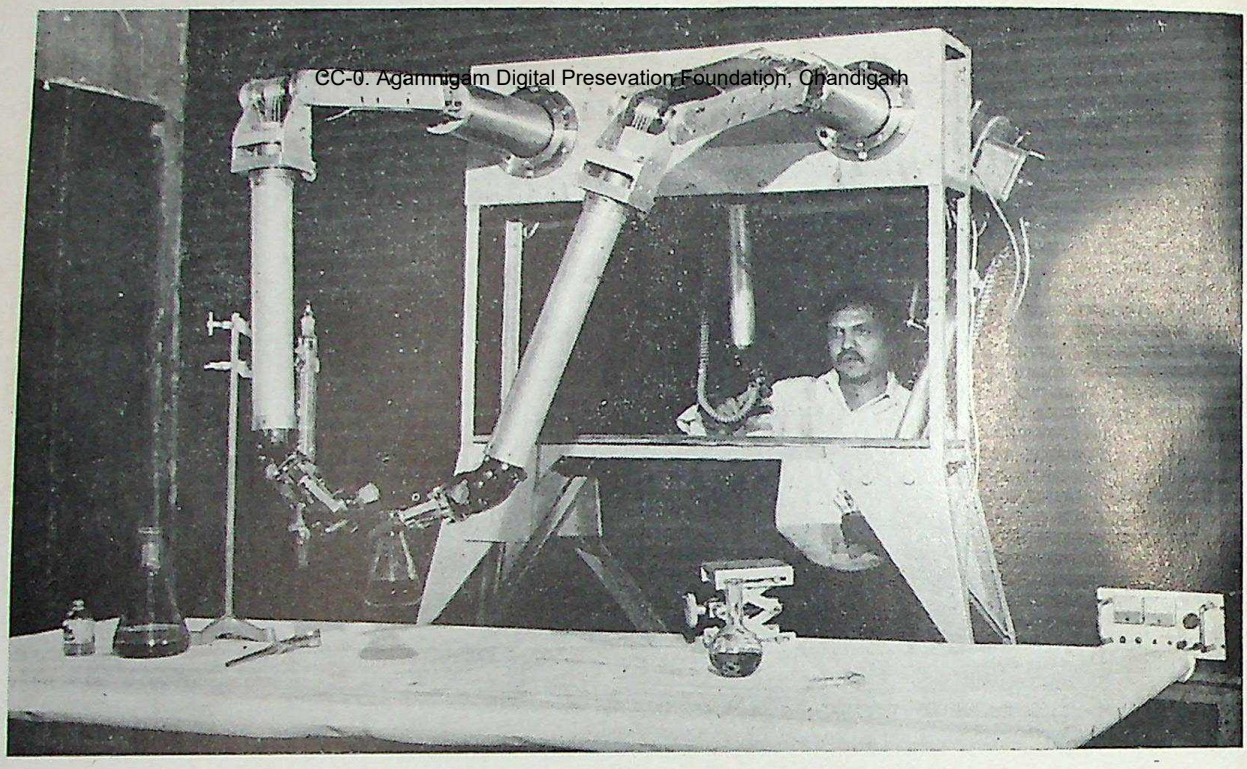
SLV-3 zooms into space with its payload, Rohini-I satellite

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh



The Satellite 'Bhaskara' launched on 7 June 1979 from a Russian Cosmodrome

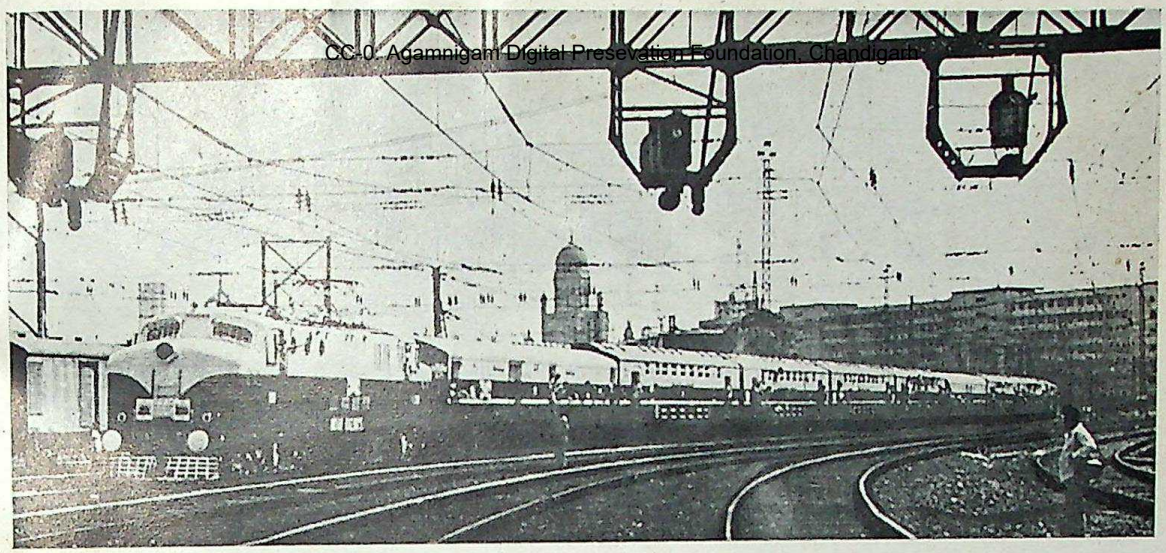
CC-0. Agamnigam Digital Presevation Foundation, Chandigarh



Mechanical arm used in lead-shielded radio-active cells for conducting remote-controlled laboratory operations developed by BARC, Bombay.

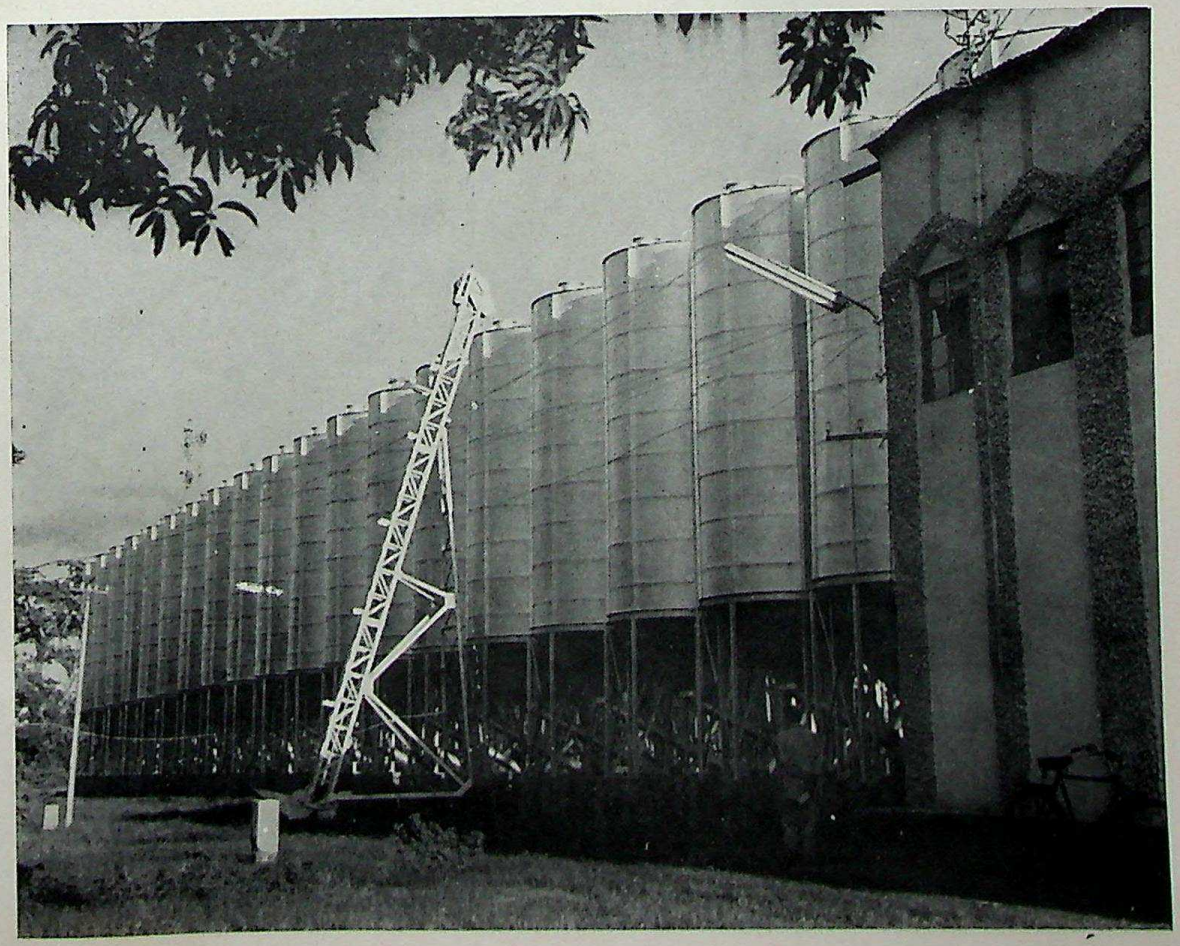
High-yielding groundnut mutants developed at the Bhabha Atomic Research Centre, Bombay. Left TG-3 which has been released for general cultivation. Middle and the right are samples of TG-19A another variety of groundnut possessing extra large kernels and good pod setting. These kernels weigh one gramme compared to 0·5 grammes of the normal variety.

CC-0. Agamnigam Digital Preservation Foundation, Chandigarh

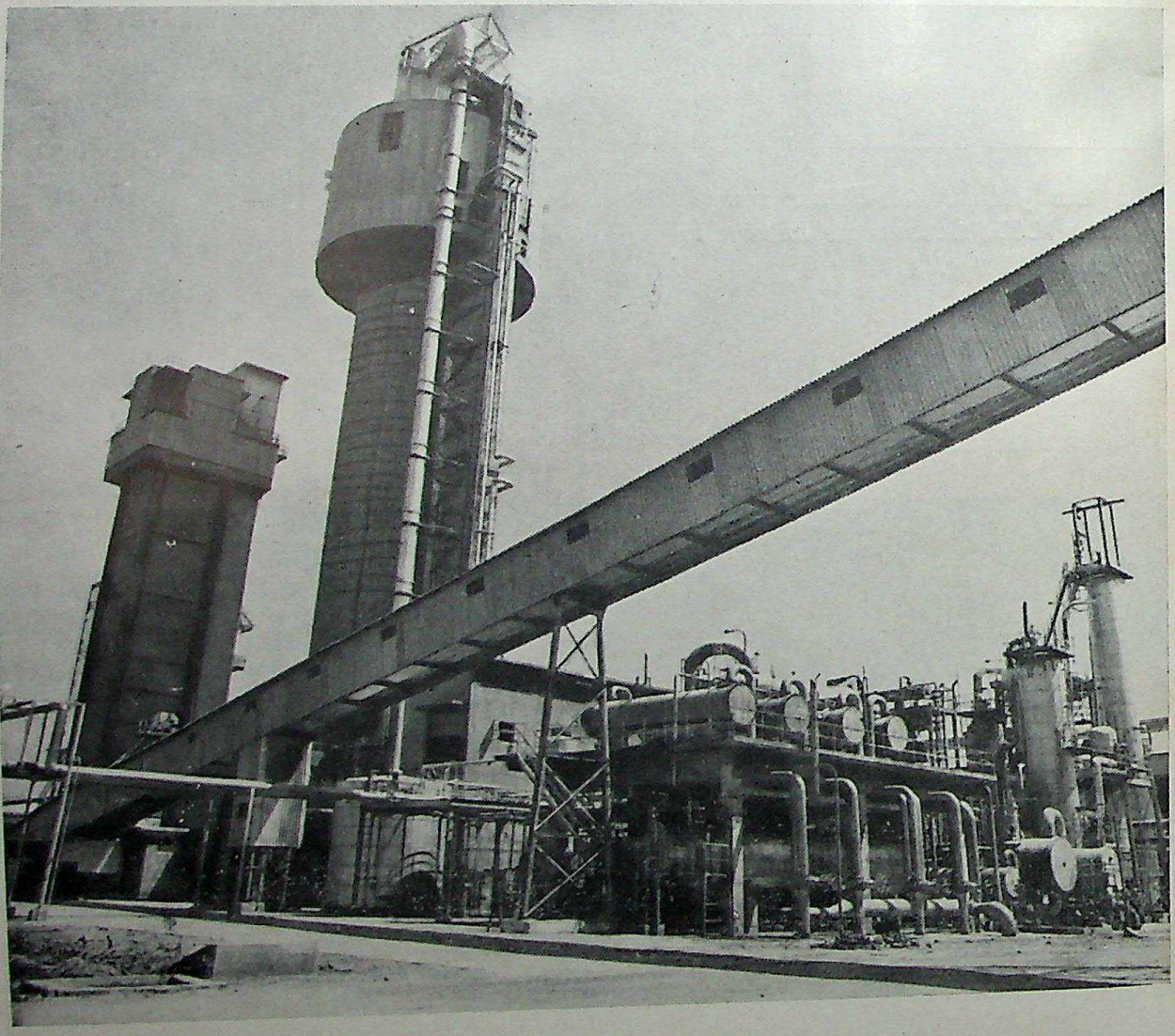


The first fully double-decker train leaving Bombay V. T. Station on its maiden journey to Pune on 12 *April* 1978

Grain storage tank



CC-0. Agamnigam Digital Presevation Foundation, Chandigarh



A view of the ammonia plant in Gujarat Fertilizer Corporation, Baroda

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

Tribal men and women in their traditional dresses

A tribal family buffeted into the modern world

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

The transistor revolution

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

The Fifth Five Year Plan was terminated one year ahead and it was decided to formulate a new five year plan from 1978-79 itself. Accordingly a draft Five Year Plan for 1978—83 was formulated in April 1978.

Draft Sixth Plan

The overall Plan size projected for 1978—83 is Rs. 1,16,240 crores. Of this, the share of public sector outlay is Rs 69,380 crores (this includes Rs 59,130 crores of new investments and Rs 10,250 crores as current outlay). The share of private-sector is Rs 46,860 crores.

The outlay provided for industries and minerals sector (excluding energy) amounted to Rs 10,350 crores or 14.9 per cent of the total public sector outlay. Of this, the share of large and medium industries is Rs 8,940 crores and that of village and small industries Rs 1,410 crores.

An average rate of growth of industrial production envisaged in the draft Five Year Plan (1978—83) is 7 per cent to achieve an over-all rate of growth of 4.7 per cent during the period. The rate of growth achieved during 1978-79 was 7.5 per cent.

PUBLIC SECTOR

Over the last three and a half decades, the public sector has emerged as a major factor in the country's economic growth. The public sector in industry comprises : (i) public utilities like the railways, road transport services, ports, posts and telegraphs, power and irrigation projects; (ii) departmental undertakings of the central and state governments, such as, the Chittaranjan Locomotive Works, the Integral Coach Factory at Perambur and various defence production establishments; and (iii) number of other industrial undertakings which derive their finances almost wholly either from the central government or the state governments in the form of equity capital and loans. While (i) and (ii) have been dealt with at length in other chapters of this book and details of the working of (iii) are given later in this chapter, some salient features of this category are given below :

On 31 March 1978 there were 153 central government public undertakings excluding the Insurance Corporations, the National Textile Corporation and its subsidiaries and three companies which come under Section 25 of the Companies Act, 1956 and whose activities are not commercial in nature. Of these, 142 were enterprises producing and selling goods and enterprises rendering services and 11 were under construction. The number of such units and the expansion of investment in them since the commencement of the First Five Year Plan is shown in table 18.1.

Investment

Investment (equity and loan) grew from Rs 4,301 crores in 1969-70 to Rs 12,851 crores in 1977-78. Sector-wise distribution of investment is shown in table 18.2.

Turnover

Total turnover of theu ndertakings amounted to Rs 17,556 crores during 1977-78 as against Rs 14,542 crores in the previous year registering an increase of 20.7 per cent. The pattern of turnover in the enterprises during 1975-76, 1976-77 and 1977-78 is given in table 18.3.

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

TABLE 18.1
EXPANSION OF INVESTMENT IN PUBLIC SECTOR

Period	Number of Enterprises	Investment (Rs crores	Average annual growth rate (per cent)
At the commencement of			
First Plan	5	29	—
Second Plan	21	81	36
Third Plan	48	953	233
At the end of the Third Plan (as on 31 March 1966)	74	2,415	31
As on 31 March			
1970	91	4,301	10
1972	101	5,052	8
1973	113	5,571	10
1974 (end of the Fourth Plan)	122	6,237	12
1975	129	7,261	16
1976	129	8,973	23·6
1977	145	11,097	24·8
1978	153	12,851	15·8

Exports

The value of exports by public sector undertakings during 1977-78 was Rs 406 crores as against Rs 422 crores in the preceding year. Foreign exchange earned by other than through exports (ship repairs, freight earnings), amounted to Rs 498 crores in 1977-78 as against Rs 408 crores in 1976-77. The value of exports canalised through trading concerns came down from Rs 1,416 crores in 1976-77 to Rs 658 crores during 1977-78. Some of the products exported were industrial boilers, electronic instruments, machine tools, pig iron, rail coaches, steel, equipment for power stations, steel structures, scooters etc. The total foreign exchange earnings by the public sector worked out to Rs 1,562 crores in 1977-78 as against Rs 2,246 crores in 1976-77.

Profit

The gross profit earned by the enterprises after providing for depreciation, but before interest and tax during 1977-78 worked out to Rs 947 crores. The profit after payment of interest but before tax for 1977-78 was Rs 236 crores. Eighty-one enterprises contributed profits totalling Rs 628 crores and 61 enterprises showed a loss of Rs 392 crores.

Generation of Resources

The total resources generated by the public sector including the contribution to the Public Exchequer in the form of dividends, interest on loans, income tax and excise duty during the period between 1974-75 and 1977-78 amounted to Rs 8,453 crores. During 1977-78 the enterprises had generated resources of Rs 731 crores.

Employment

The number of persons in the employment of the 153 enterprises was 16.38 lakhs in 1977-78 as against 15.75 lakhs in 1976-77. Salaries and wages paid to the employees totalled Rs 1,646 crores during 1977-78 as against Rs 1,408 crores in 1976-77.

INDUSTRIAL PRODUCTION

Production in selected industries in different years since 1950-51 is given in table 18.4. Data for 1978-79 show that there had been increase in production of several basic industries.

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

TABLE 18.2
SECTOR-WISE DISTRIBUTION OF INVESTMENT IN PUBLIC SECTOR UNDERTAKINGS

(Rs *crores*)

Category	At the end of 1976-77		At the end of 1977-78	
	Investment	Percentage of total investment	Investment	Percentage of total investment
A. *Enterprises producing and selling goods*:				
Steel	2,864·31	25·8	3,056·62	23·8
Minerals and metals-other than coal	704·25	6·4	943·23	7·3
Minerals and metals—coal	1,277·09	11·5	1,435·86	11·2
Petroleum	689·71	6·2	816·84	6·3
Chemicals and pharmaceuticals	2,076·22	18·7	2,528·87	19·7
Heavy engineering	803·34	7·3	826·65	6·4
Medium and light engineering	215·78	2·0	242·79	1·9
Transportation equipment	335·41	3·0	367·55	2·8
Consumer goods	178·25	1·6	344·40	2·7
Agro-based enterprises	11·49	0·1	14·01	0·1
B. *Service enterprises* :				
Trading and marketing services	527·73	4·8	565·09	4·4
Transportation services	933·29	8·4	1,079·59	8·4
Contracts and construction services	38·12	0·3	48·13	0·4
Industrial development and technical consultancy services	3·86	0·1	6·83	0·1
Development of small industries	46·26	0·4	33·77	0·3
Tourist services	20·12	0·2	20·92	0·2
Financial Services	370·78	3·3	520·28	4·0
Total (A+B)	11,096·51	100·0	12,851·43	100·0

The index of industrial production (base : 1970=100) during 1978-79 went up nearly 12 points and registered a growth rate of 7.5 per cent during the year. The manufacturing sector showed a growth rate of 7.6 per cent. In this sector, 16 out of 18 industry groups, accounting for 80 per cent of the total weight, showed increase in production; notable among them were : miscellaneous manufacturing industries 12.4 per cent; tobacco 9.5 per cent; metal products 11.9 per cent; electrical machinery 15 per cent; non-electric machinery 14.4 per cent and food manufacturing 12.8 per cent. However, there was decline in the output of leather and fur products and leather footwear. Electricity generation attained a growth rate of 12 per cent.

The groupwise index numbers (1960=100) for 1951, 1961, 1966, 1971, and for 1976-77, 1977-78 and 1978-79 (1970=100) are given in table 18.5.

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

TABLE 18.3
TURNOVER OF THE ENTERPRISES

(Rs crores)

Category	1975-76	1976-77	1977-78
A. Enterprises Producing and selling goods:			
Steel	906	1,425	1,592
Minerals and metals:			
(a) Other than coal	176	212	258
(b) Coal	535	662	712
Petroleum	3,683	4,625	5,863
Chemicals and pharmaceuticals	474	562	642
Heavy engineering	567	720	719
Medium and light engineering	347	389	461
Transportation equipment	310	324	330
Consumer goods	64	74	81
Agro-based enterprises	27	28	23
Total	7,089	9,021	10,681
B. Service Enterprises :			
Trading and marketing services	3,841	4,527	5,707
Transportation services	556	706	796
Contracts and construction services	98	126	170
Industrial development and technical consultancy services	40	85	119
Small industries	27	25	17
Tourist services	18	24	29
Financial services	19	28	37
Total	4,599	5,521	6,875
Grand total (A+B)	11,688	14,542	17,556

PRINCIPAL INDUSTRIES

COTTON TEXTILES

The origin of the cotton textile, industry the largest single industry in the country, dates back to 1818 when the first cotton mill was established at Fort Gloster near Calcutta. The grant of protection and the Swadeshi movement enabled the industry to make rapid strides. The number of mills increased to 389 in 1937 with 2,02,464 looms. At the end of 1977, there were 704 mills (412 spinning and 292 composite) with an installed capacity of 198.4 lakh spindles and 2.08 lakh looms. In 1947, cotton yarn production was 59.7 crore kg and piecegoods production 350.9 crore metres. The production of cotton yarn in 1977 was 84.6 crore kg and that of cotton cloth 322.4 crore metres. The decentralised sector of handlooms and powerlooms produced another 367.9 crore metres of cotton cloth.

Production of cotton yarn and cloth since 1950-51 is shown in table 18.4.

JUTE

The jute industry is one of the oldest in the country. As a major foreign exchange earner, it occupies an important place in the country's economy. The first power-driven jute mill was established at Rishra near Calcutta in 1859 and thereafter the industry made rapid progress. The partition of the country in 1947 deprived the industry of its vital raw material and reduced the number of mills to 106. Production in 1947-48 was only 16.5 lakh bales as against the pre-

TABLE 18·4

PROGRESS OF INDUSTRIAL PRODUCTION (SELECTED INDUSTRIES)

Industry (unit)	1950-51	1960-61	1965-66	1970-71	1975-76	1976-77	1977-78	1978-79[1]
1	2	3	4	5	6	7	8	9
I. *Mining*								
1. Coal (including lignite) (lakh tonnes)	328	557	703	743	1,027	1,048	1,045	1,054
2. Iron ore (lakh tonnes)[2]	30	110	181	225	422	422	440	382
II. *Metallurgical industries*								
3. pig iron (lakh tonnes)	16·9	43·1	70·9	69·9	85·5	100·6	95·1	94·9
4. Steel ingots (lakh tonnes)[9]	14·7	34·2	65·3	61·4	74·8	86·6	84·3	81·6
5. Saleable steel (lakh tonnes)[10]	10·4	23·9	45·1	44·8	59·2	70·6	68·9	65·9
6. Steel castings ('000 tonnes)	—	34	57	62	61·9	63·2	69·7	75·4
7. Aluminium (virgin metal) ('000 tonnes)	4	18·3	62·1	166·8	187·3	208·7	178·5	213·7
8. Copper (virgin metal) ('000 tonnes)	7·1	8·5	c	9·3	23·9	23·7	21·0	21·9
III. *Mechanical Engineering Industries*								
9. Machine tools (Rs crores)	0·3	7	22·4	43·0	114·1	116·3	107·6	132·8
10. Railway wagons ('000)[3]	2·9	11·9	33·5	11·1	12·2	12·0	12·3	11·6
11. Automobiles ('000 no.)[4]	16·5	55	70·7	87·4	72·7	91·3	—	—
(i) Commercial vehicles ('000 no.)[5]	8·6	28·4	35·3	41·2	43·8	46·4	41·0	57·7
(ii) Passenger cars etc. ('000 no.)	7·9	26·6	35·4	46·2	21·8	36·5	34·2	33·4
12. Power-driven pumps ('000 no.)	35	109	224	259	274	309	355·3	366·5
13. Motor cycles and scooters ('000 no.)	—	19·4	40·7	97·0	182·4	228·9	227·3	252·6
14. Diesel engines (stationary) ('000 no.)	5·5	44·7	93·1	65·7	137·6	111·6	133·9	143·5
15. Bicycles ('000 no)	99	1,071	1,574	2,042	2,330	2,677	3,183	3,718
16. Sewing machines ('000 no.)	33	303	430	235	269	385	367	206
IV. *Electrical Engineering Industries*								
17. Power transformers (lakh kva)	1·8	41·1	44·6	80·9	139	151	161·3	205·0

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

INDIA 1980 Digitized by Arya Samaj Foundation Chennigam Digital Presevation Foundation, Chandigarh

1	2	3	4	5	6	7	8	9
18. Electric motors ('000 hp)	99	728	1,753	2,721	3,610	3,670	3,960	3,980
19. Electric fans (lakhs no.)	2	10·6	13·6	17·2	21·4	26·3	34·0	31·0
20. Electric lamps (lakh no.)	140	435	721	1,193	1,231	1,619	1,685	1,828
21. Radio receivers ('000)	54	282	606	1,794	1,536	1,685	1,875	1,898
22. Electric cables and wires:								
(i) Aluminium conductors ('000 tonnes)	1·7	23·6	40·6	64·2	60·9	84·2	57·6	65·5
(ii) Bare copper conductors ('000 tonnes)	5	10·1	3·1	0·7	1·3	1·4	—	—
V. *Chemicals and Allied Industries*								
23. Nitrogenous fertilizers ('000 tonnes of N)	9	98	233	830	1,535	1,900	2,023	2,164
24. Phosphatic fertilizers ('000 tonnes of P_2O_5)	9	52	111	229	320	480	647	771
25. Sulphuric acid ('000 tonnes)	101	368	662	1,053	1,416	1,802	—	—
26. Soda ash ('000 tonnes)	45	152	331	449	565	568	573	581
27. Caustic soda ('000 tonnes)	12	101	218	371	467	506	524	562
28. Paper and paper board ('000 tonnes)	116	350	558	755	836	899	961	1,008
29. Rubber tyres—								
(i) Auto tyres (lakh no)	8·7	14·4	23·1	37·9	54·9	62·5	—	—
(ii) Bicycle tyres (lakh no)	33	111·5	184·6	192·0	245	299	284	19
30. Cement (lakh tonnes)	27·3	79·7	108·2	144·0	172	188	193	193
31. Refractories ('000 tonnes)	237	567	695	683	729	788	805	812
32. Petroleum products refined (lakh tonnes)	2	58	94	171	210	216	232	241
VI. *Textile Industries*								
33. Jute textiles ('000 tonnes)	837	1,097	1,302	958	1,302	1,186	1,179	1,046
34. Cotton yarn (crore kg)	53·4	80·1	90·7	92·9	110·5	112·5	114·9	127·3
35. Cotton cloth (crore metres)	421·5	637·8	744·0	759·6	834·8	810·5	782·5	864·0
(i) Mill sector (crore metres)	340·1	464·9	440·1	405·5	421·9	416·1	413·5	431·8
(ii) Decentralised sector (crore metres)	81·4	208·9	303·9	354·1	412·9	394·4	369·0	432·2
36. Rayon yarn ('000 tonnes)[6]	2·1	43·8	75·6	98·1	104·5	127·3	—	—
37. Artsilk fabrics (crore metres)	28·7	54·4	87·8	94·7	87·5	120·0	102·8	—

38. Woollen manufactures								
(i) Woollen and worsted yarn (lakh kg)	87	130	170	197	466	445	—	—
(ii) Woollen and worsted fabrics (lakh metre)	61	133	92	143	263	236	—	—
VII. *Food Industries*								
39. Sugar (Oct-Sept) (lakh tonnes)	11·3	30·3	35·1	37·4	46·4	48·4	64·6	58·6[7]
40. Tea (crore kg)	27·7	32·2	37·6	42·1	48·2	51·9	55·7	57·9
41. Coffee ('000 tonnes)	21	54·1	62·1	72·7	83·0	102·5	—	—
42. Vanaspati ('000 tonnes)	170	340	401	558	500	540	572	678
VIII. Electricity generated (crore kwh)[8]	530	1,690	3,300	5,580	7,985	8,920	9,220	10,322

[1]Provisional
[2]Excludes output in Goa up to 1969-70.
[3]Excludes output in railway workshops.
[4]Includes landrovers, jeeps, utilities, station wagons and vans.
[5]Includes buses, trucks, tempos and three and four wheelers.
[6]Includes viscose yarn, staple fibre and acetate yarn.
[7]Relates to October to August 1979.
[8]Relates to public utilities only
[9]In terms of steel up to 1970-71.
[10]In terms of finished steel up to 1970-71.

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh
INDIA 1980

TABLE 18·5

INDEX OF INDUSTRIAL PRODUCTION

(Base : 1960=100) (Base : 1970=100)[1]

1951	1961	1966	1971	Industry Group	1976-77	1977-78	1978-79[2]	Percentage change in 1978-79 over 1977-78
54·8	109·2	153·2	186·1	General Index	134·3	139·6	150·1	7·5
66·6	105·4	136·1	153·4	Mining and quarrying	137·9	141·3	144·1	2·0
37·7	116·3	207·8	358·5	Electricity generated	162·1	167·6	187·9	12·1
—	—	—	—	Manufacturing	130·7	136·2	146·5	7·6
66·9	108·6	130·5	157·6	Food manufacturing	113·0	124·1	140·0	12·8
58·0	107·0	158·9	182·5	Beverage industries Tobacco industries	315·9 107·0	362·9 107·9	379·8 118·1	4·7 9·5
79·7	102·8	108·9	106·0	Textiles	103·9	104·7	110·1	5·2
n.a.	104·8	106·5	105·2	Cotton textiles	—	—	—	—
n.a.	89·1	100·4	94·7	Jute textiles	—	—	—	—
63·5	115·4	184·2	168·1	Footwear (Leather)	91·7	73·0	76·4	4·7
43·5	95·5	205·1	224·1	Wood and cork	121·6	129·9	123·2	(—)5·2
38·5	105·8	160·0	225·7	Paper products	111·1	115·2	121·7	5·6
72·4	100·9	120·9	55·3	Leather and fur products	110·9	92·3	72·7	(—)21·2
56·1	112·9	160·2	241·8	Rubber products	126·9	129·9	145·1	11·7
42·4	113·4	168·4	252·7	Chemicals and Chemical products	161·5	172·3	186·1	8·0
11·0	106·0	195·9	316·0	Petroleum refinery products	125·9	137·0	141·0	2·6
39·0	106·9	148·1	207·6	Non-metallic mineral products	142·8	148·7	153·2	3·0
46·5	118·7	191·5	208·6	Basic metal industries	143·7	143·1	144·0	0·6
30·7	112·4	208·4	234·4	Metal products	134·6	140·9	157·6	11·9
22·2	121·2	295·6	373·2	Machinery except electrical machinery	169·6	181·5	207·7	14·4
26·3	110·0	225·1	404·8	Electrical machinery	133·8	141·0	162·2	15·0
19·6	116·7	156·0	122·1	Transport equipment	124·8	123·0	127·8	3·9
n.a.	102·7	132·2	114·0	Miscellaneous manufacturing industries	82·4	111·3	125·1	12·4

1 Figures for recent years in the table have been computed on new base ; 1970-100. The general index of industrial production in 1970 on base 1960=100. stood at 184·3.

2 Provisional. n. a.—Not available.

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

JUTE

partition output of 65.70 lakh bales. In 1961-62, production of raw jute reached a record level of 80 lakh bales but came down to 58 lakh bales in 1974-75 and 59 lakh bales in 1975-76 due to unfavourable weather conditions. During 1976-77, the production of raw jute picked up and stood at 68 lakh bales. Production of jute goods during 1976-77 stood at 11.77 lakh tonnes. The value of exports, however, during 1977-78 was Rs 231 crores as against Rs 199.24 crores during the previous year. Table 18.4 shows the progress of the jute industry since 1950-51.

The Jute Corporation of India was set up in 1971 to manage the export, import and internal marketing of raw jute. During 1977-78, it was able to stabilise the prices of raw jute particularly in some areas of Assam and Tripura.

SUGAR

The sugar industry ranks second among the major agro-industries. The number of factories went up from 138 in 1950-51 to 288 in 1977-78. Production increased from 11.34 lakh tonnes in 1950-51 to 64.72 lakh tonnes in 1977-78. Sugar exports during 1977-78 were 2.02 lakh tonnes as against 3.12 lakh tonnes in 1976-77. A notable feature of the development of the sugar industry after 1947 was its remarkable expansion in the cooperative sector. Out of 288 factories in 1977-78, 132 were in the cooperative sector which produced about 49 per cent of sugar output.

The policy of partial control of sugar which had been in operati since July 1972, was reviewed. In view of the substantial production of about 66 lakh tonnes and accumulation of stocks with sugar factories which were estimated to be of the order of 32 lakh tonnes at the close of the last sugar season and in view of the low prices of sugar in the open market, all controls on the prices, distribution and releases were removed with effect from 16 August 1978. The stock holding limit of the sugar dealers were also liberalized in view of easy availability of sugar.

The progress of the industry since 1950-51 is shown in table 18.6.

TABLE 18.6
GROWTH OF SUGAR INDUSTRY

	1950-51	1960-61	1965-66	1973-74	1974-75	1975-76	1976-77	1977-78
Number of mills	138	174	200	229	246	252	271	288
Production ('000 tonnes)[1]	1,134	3,021	3,541	3,948	4,794	4,245	4,814	6,472

[1]Upto 1966-67 the Sugar year was November-October but later it was changed to October-September.

VANASPATI

The vanaspati industry came into existence in the beginning of 1930 with very limited production. It continued to make rapid progress up to 1971-72 when it touched the peak level of production at 5.94 lakh tonnes. However, the production of vanaspati declined from 1972-73 to 1974-75 mainly due to fall in production of edible oils. In 1975-76 production picked up appreciably touching the level of 5 lakh tonnes. The number of vanaspati units rose from 48 in 1950-51 to 85 in 1976-77. Vanaspati production in 1979 was 6.37 lakh tonnes.

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

CEMENT

Manufacture of cement was first started in Madras in 1904. A real beginning on a large scale, however, was made in 1912-13 when three companies were formed. At present, there are 56 cement factories, 11 in the public sector, with a total installed capacity of about 2.26 crores tonnes per annum. Total production of cement (all varieties) in 1978-79 was 1.94 crore tonnes as compared to 29 lakh tonnes in 1950-51.

The Cement Corporation of India, New Delhi, is the only public sector undertaking in the central sector, so far as the cement industry is concerned. It has four factories, one each in Karnataka, Himachal Pradesh, Assam and Madhya Pradesh. While the former three factories have a capacity of two lakh tonnes each per annum, the latter has a capacity of 3.80 lakh tonnes per annum. Three more factories at Neemuch and Akaltara in Madhya Pradesh and Yerraguntala in Andhra Pradesh, each with a capacity of four lakh tonnes per annum, are under construction and are likely to go into production during 1980-81. Another factory at Adilabad in Andhra Pradesh with an annual capacity of four lakh tonnes is also expected to go into production by 1982-83. In order to increase the availability of cement, government has decided to discontinue the export of cement outside the country except to Nepal and Bhutan. During 1978-79, a total quantity of 16.5 lakh tonnes of cement was imported.

The growth of the industry is traced in table 18.4.

Asbestos Cement

The installed capacity of asbestos cement products is 6.77 lakh tonnes spread over 12 units. Production in 1979 was estimated to be 6.28 lakh tonnes as compared to 5.5 lakh tonnes in 1978.

PAPER AND PAPER BOARD

Production of machine-made paper in India dates back to 1870, when the Bally Mills was established near Calcutta. Between 1939 and 1945 the number of mills increased to 15 and production reached 1,03,884 tonnes (1944). Rapid progress has been made since 1950. There are at present 106 paper mills with a total capacity of 13.83 lakh tonnes per annum. Production in 1978 was 10.06 lakh tonnes as against 1.09 lakh tonnes in 1951. The progress of the industry is shown in table 18.4.

The Hindustan Paper Corporation Ltd., New Delhi, a public sector undertaking, was set up in 1970 to establish pulp and paper projects in the country. The Corporation has drawn up plans to set up three pulp and paper projects and one newsprint project. The Nagaland pulp and paper project with a capacity of 33,000 tonnes per annum of pulp and writing and printing paper is expected to go into production in 1980. The other two units, namely, the Nowgong pulp and paper project and the Cachar pulp and paper project, when set up will have a capacity of one lakh tonnes each of paper and pulp per annum. The Kerala newsprint project of the Corporation on which work was started in 1975 at Velloor will have an installed capacity of 80,000 tonnes per annum of newsprint. It is likely to be completed by 1980-81.

Newsprint

The National Newsprint and Paper Mills Ltd., Nepanagar in Madhya Pradesh, the only newsprint mill in the country, went into production in 1955. The mill, which is in the public sector, has an installed capacity of 60,000 tonnes per annum. An expansion programme was implemented in 1975 to raise its capacity to 75,000 tonnes annu-

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

ally. The production in 1978-79 was about 48,858 tonnes as compared to 56,584 tonnes in 1977-78.

PHOTO PAPER AND FILMS

The Hindustan Photo Films Manufacturing Co. Ltd., was set up at Ootacamund in 1960 by the Government of India for the manufacture of cine, X-ray, roll and graphic art films and photo paper. The project has an installed capacity of 61.5 lakh sq metres. During 1978-79, it produced 94.16 lakh sq metres of various kinds of photographs material valued at Rs 40.53 crores as against 92.23 lakh sq metres valued at Rs 35.58 crores in 1977-78. The company made a profit of Rs 232.34 lakhs in 1978-79.

IRON AND STEEL

The earliest successful attempt to manufacture iron and steel by modern methods was made in the country in 1874. But the first efforts at large-scale production got under way when the Tata Iron and Steel Company (TISCO) was set up at Jamshedpur in 1907. This was followed by the establishment of the Indian Iron and Steel Company (IISCO) at Burnpur in 1919. The first unit in the public sector, now known as the Visvesvaraya Iron and Steel Works, Ltd., started functioning at Bhadravati in 1923. After Independence, the development of the steel industry was considered during the First Plan but it was only in the Second Plan (1956-61) that work started to set up three integrated steel projects each with 10 lakh ingot tonnes capacity at Bhilai, Durgapur and Rourkela. An expansion programme to double the capacity of the two private sector steel plants, namely, TISCO and IISCO, to 20 lakh tonnes and 10 lakh tonnes respectively was also taken in hand. The three plants in the public sector came into operation in stages between 1956 and 1962 and the expansion of the private sector factories was completed in 1959. In the Third Plan, the emphasis was on expansion of the three public sector steel plants and the setting up of a new steel works at Bokaro. The Fourth Plan steel programme was based on the maximum utilization of existing steel capacity and preparation of plans to set up three new steel plants at Salem (Tamil Nadu), Vijayanagar (Karnataka) and Vishakhapatnam (Andhra Pradesh) to create additional steel capacity to meet the requirements in the Fifth Plan.

However, it was only by the close of the Fifth Plan which terminated a year ahead of the schedule on 31 March 1978 that there was addition to steel making capacity of the order of 17 lakh tonnes with the commissioning of the Bokaro Steel Plant on 26 February 1978. The total installed ingot steel capacity which stood at 89 lakh tonnes as on 31 March 1974 had increased to 106 lakh tonnes by 31 March 1978.

Earlier, the management of IISCO was taken over by the government on 14 July 1972 and the ownership of the company acquired on the 17 July 1976 with a view to improve its working.

There are at present six integrated steel plants in the country, five in the public sector and one in the private sector. Table 18.7 shows the capacity of the six integrated steel plants.

Bhilai and Bokaro Steel Plants are presently under expansion to a capacity of 40 lakh ingot tonnes each. The expansion of Bhilai Steel Plant is likely to be completed by the middle of 1983 and of Bokaro Steel Plant by the end of 1982. Proposals are presently under consideration to further increase the capacity of these plants by intro-

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

TABLE 18.7
RATED CAPACITY OF STEEL PLANTS

('000 tonnes)

Plant	Rated capacity	
	Ingot steel	Saleable steel
Public Sector		
Bhilai	2,500	1,965
Durgapur	1,600	1,239
Rourkela	1,800	1,225
Bokaro	2,500	2,000
IISCO	1,000	800
Private Sector		
TISCO	2,000	1,500
Total :	11,400	8,729

duction of technological improvements and provision of balancing and other facilities with minimum capital outlay. Government has recently sanctioned the installation of a plant at Rourkela to produce 37,500 tonnes of CRGO and 36,000 tonnes of CRNO sheets per annum to meet the requirements of electrical industry. Besides the mild steel plants, there is an alloy steels plant at Durgapur in the public sector with an annual capacity of 1,00,000 tonnes of ingots. The plant is now being expanded to a capacity of 16,000 tonnes. The Visvesvaraya Iron and Steel Limited (VISL) at Bhadravati with a capacity of 72,000 tonnes of alloy and special steels and 48,000 of mild steel ingot is jointly owned by the central government and the state government of Karnataka. A forge plant is being installed and it would increase capacity for alloy and special steels at VISL by 5,000 tonnes.

Mini Steel Plants

To encourage the augmentation of steel production by the private sector, a number of small or medium sized electric furnaces grew up in the past. They utilize scrap as raw material.

The mini-steel plants grew fast and large in number. Owing to a variety of factors they got into a languishing state with their production falling and consequently losses in their operation. Government took a number of special measures to improve their viability.

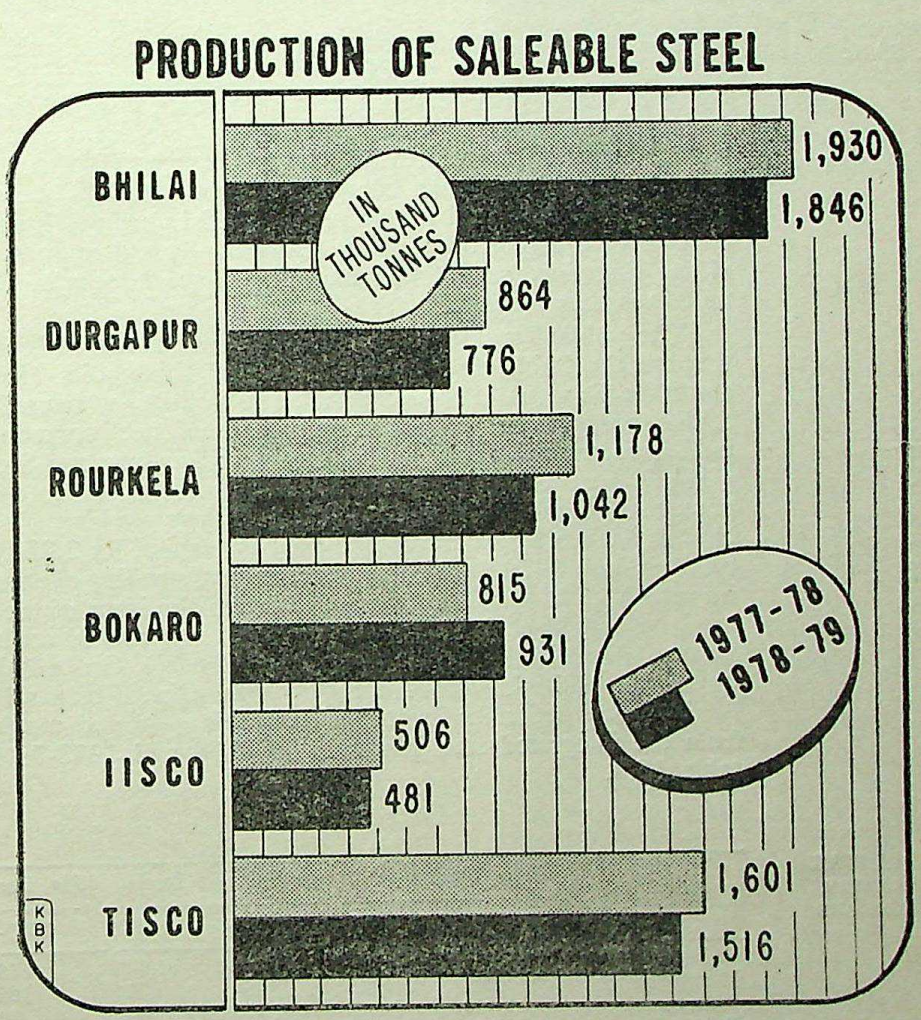
At present there are 145 licensed electric arc furnace units with a total capacity of 33.2 lakh tonnes per year. Their production during 1978-79 was nearly 17 lakh tonnes. The mini-steel plant have now become a healthy partner of the integrated steel plants in increasing the availability of steel. Their location at convenient points helps to meet steel requirements of far-flung areas, thus promoting a balanced regional growth.

Sponge Iron

In view of the importance of utilizing our large non-coking coal reserves for steel making and for conserving coking coal resources, a special project has been taken up at Kothagudem in Andhra Pradesh. The project envisages production of sponge iron through direct reduction process using non-coking coal as solid reductant. This is a UNDP assisted project and is based on imported technology with a capacity of 30,000 tonnes a year.

A letter of intent is being implemented by M/s of Industrial Investment and Promotion Corporation of Orissa Limited with a capacity of 3,00,000 tonnes a year.

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh



CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

Successful production of sponge iron will promote production of steel including alloy steel in electric furnace units and reduce the consumption of scrap and metallurgical coke.

Prior to 1973, of the four public sector steel plants, the plants at Bhilai, Durgapur and Rourkela were owned and managed by the Hindustan Steel Limited (HSL) and the plant at Bokaro by Bokaro Steel Limited (BSL). HSL and BSL became the wholly owned subsidiaries of SAIL in January 1973 when SAIL was incorporated as a holding company for steel and associated input industries.

Restructuring of SAIL

The organisation, structure and the functioning of the public sector steel plants and SAIL was reviewed by the government in October 1977. Since all major policy issues and development plans of the steel industry in the public sector were approved by government and all funds for capital schemes were provided by it through budgetary support, the interposition of a holding company between the Ministry of Steel and the operating units did not serve any useful purpose, it was felt. The concept of bringing these plants under the overall responsibility of providing direction, supervision and auxilliary services to the operating units was thus mooted.

The public sector steel industry was accordingly restructured through the Public Sector Iron and Steel Companies (Restructuring) and Miscellaneous Provisions Act, 1978 effective from 1 May 1978. SAIL thus emerged as the main integrated steel company with five public sector steel plants, including the Indian Iron and Steel Company (IISCO) as its constituent unit. This is intended to ensure better management and improved efficiency in their working. Its authorised capital was Rs 2,500 crores and paid up capital Rs 2,228.02 crores as on 31 March 1979 (excluding share money pending allotment amounting to Rs 29.85 crores). Consequent upon the issue of the Public Sector Iron and Steel Companies (Restructuring) and Miscellaneous Provisions (Modification of Paid-up share Capital) Order 1979, the paid up capital of the integrated company was reduced by Rs 77.77 crores.

The production of ingot steel, saleable steel and pig iron for sale from the integrated steel plants in 1977-78 and 1978-79 is shown in table 18.8.

TABLE 18.8 PRODUCTION OF IRON AND STEEL

('000 tonnes)

Plant	Ingot Steel		Saleable Steel		Pig iron for sale	
	1977-78	1978-79	1977-78	1978-79	1977-78	1978-79
Bhilai	2,371	2,200	1,930	1,846	669	606
Durgapur	1,092	945	864	776	102	146
Rourkela	1,409	1'319	1,178	1,042	16	4
Bokaro	933	1,195	815	931	512	608
IISCO	651	6,128	506	481	135	123
TISCO	1,968	1,866	1,601	1,516	—	—
Total	8,424	8,153	6,894	6,592	1,464	1,487

Salem Steel Project

The detailed project report of Salem plant envisaging the production of 2,20,000 tonnes of sheet and strip products, comprising 70,000 tonnes of stainless steel, 75,000 tonnes of electrical steel and 75,000 tonnes of other special steel was approved by government in March 1977. The implementation of the first stage of the project planned to produce

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

32,000 tonnes of cold rolled stainless steel sheets and strips is in progress. It is expected to be completed by the end of 1981.

Visakhapatnam Steel Project

Government sanctioned in June 1979, the setting up of about 34 lakh tonne capacity integrated steel plant at Visakhapatnam in two overlapping stages at an estimated cost of Rs 2,256 crores including a foreign exchange component of Rs 500.20 crores. The production capacity envisaged for the first stage is 7.10 lakh tonnes of light medium merchant mill products, 3.05 lakh tonnes of saleable billets and 5.12 lakh tonnes of saleable pig iron. The first stage is scheduled to be completed in four years. The second stage will be taken up on continuous basis to be completed in two years of commissioning of the first stage. The Soviet Government has extended technical and financial assistance in the setting up of the plant. The detailed project report prepared earlier by the Indian consultants is currently being revised jointly by Soviet and Indian consultants with a view to incorporating the latest technology. In the meantime, the preparatory work at the site has been taken up.

Vijayanagar Steel Project

The detailed project report on Vijayanagar plant as updated by the consultants is under examination. In the meantime, some of the preliminary works at the site are in progress.

MECON

To provide consultancy and engineering services in the field of iron and steel, the Central Engineering and Design Bureau of Hindustan Steel Limited, was incorporated in 1973 as an independent company called the Metallurgical and Engineering Consultants (India) Limited (MECON) and was a subsidiary of Steel Authority of India Limited.

With the passing of the Public Sector Iron and Steel Companies (Restructuring) and Miscellaneous Provisions Act, 1978, MECON was delinked from SAIL and placed directly under the control of the Ministry of Steel and Mines with effect from 1 May, 1978. It is one of the leading consultancy and engineering organizations in India, rendering consultancy and detailed engineering services for several major projects in India as well as abroad. MECON had successfully completed several consultancy assignments in Dubai, Abu Dabi, Liberia, Vietnam, Iraq and Bangladesh.

The Indian steel industry has acquired a high degree of technological self-reliance. Considerable expertise in planning, detailed engineering, machine making, erection etc., has been built up in institutions like MECON and Hindustan Steel Company Ltd. India now possesses capability to plan and execute the expansion of its steel making capacity. A research and development unit has been set up under SAIL and a research and development plan for the steel industry has been drawn up in consultation with the Planning Commission and Department of Science and Technology. This is expected to help the steel industry to reduce production cost and enhance the value of products by process improvement and/or introduction of new technologies, thereby helping it to retain its competitiveness with other countries.

ENGINEERING INDUSTRY

The engineering industries were started only after India attained Independence. But, today, India has not only become self-reliant in a variety of engineering equipment but also exporting engineering

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

goods. The country is currently producing power generation, transmission and distribution equipment, plant and machinery for steel, chemical and fertilizer plants, electrical and construction machinery, machine tools, railway rolling stock, commercial vehicles, earth-moving equipment, agricultural equipment and a large number of other items (see Table 18.4).

Export of Engineering Goods

In 1978-79, the engineering industries produced goods worth over Rs 4,300 crores. The progress made over the years is remarkable as the output from the light and medium industries in 1950-51 was worth only Rs 50 crores. Export of engineering goods in 1978-79 was Rs 685 crores as against only Rs 6 crores in 1950-51.

Heavy Engineering, Heavy Mechanical and Industrial Machinery

There are a large number of units in the public and private sectors which are manufacturing steel plant equipment.

The major unit in public sector manufacturing steel plant equipment, namely, the Heavy Engineering Corporation Ltd., Ranchi was incorporated in 1958. It has three units: Heavy Machine Building Plant, Foundry Forge Plant and Heavy Machine Tools Plant. The value of production of the three units during 1977-78 was Rs 39.44 crores as against Rs 86.13 crores in 1976-77.

The Triveni Structurals Ltd., was set up at Naini, Allahabad, in 1965 to promote designing and manufacturing of sophisticated steel structures. The value of production during 1977-78 was Rs 9.87 crores as against Rs 86.13 crores in 1976-77.

The Tungabhadra Steel Products Ltd, Tungabhadra dam Karnataka, manufactures structurals, transmission towers and penstock pipes. The value of production during 1977-78 was Rs 5.59 crores.

The Bharat Heavy Plates and Vessels Ltd., Vishakhapatnam, was set up in 1966 for manufacturing a range fabricating equipment required by the fertilizer and other processing industries, petroleum petro-chemicals and other heavy chemicals and allied industries. The value of production during 1978-79 was Rs 22.24 crores.

The Jessop and Co. Ltd., and the Richardson & Cruddas Ltd., both public sector undertakings, produced equipment worth Rs 43.39 crores and Rs 10.13 crores respectively during 1977-78.

Heavy mechanical industries produce, among other things, cranes, steel structurals, transmission towers, and conveyors. Production of cranes during 1977-78 was about 19,100 tonnes.

The coal mining machinery industry is now in a position to meet practically the entire requirements of the industry. A wide variety of articles like coal cutters, loaders, haulages, winders, coal combines, shuttle cars and mine locomotives are being manufactured by the public sector unit, the Mining and Allied Machinery Corporation Ltd. (MAMC), at Durgapur, and a number of private sector units. The value of production during 1978-79 was Rs 26.37 crores.

The estimated value of production of some selected industrial machinery for 1977-78 was: chemical and pharmaceutical machinery Rs 69.54 crores, sugar mill machinery Rs 51.32 crores, cement machinery Rs 22.61 crores, printing machinery Rs 3.29 crores and metallurgical machinery Rs 11.06 crores.

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

Light Mechanical Industries

Some of the important products of the light mechanical industries are bicycles and bicycle parts, balls and roller bearing, typewriters, timepieces and wrist watches, data processing machines, agricultural implements and light machinery.

Machine Tools

One hundred and eighteen major units produced machine tools valued at Rs 182.87 crores during 1979-80 and machine tools worth Rs 14.3 crores were exported during 1978-79.

Some of the important public sector undertakings manufacturing machine tools are described below :

The Hindustan Machine Tools Ltd, Bangalore, is a multi-unit company. It has units at Bangalore, Pinjore (Haryana), Kalamassery (Kerala), Hyderabad and Srinagar. The company has watch factories at Bangalore and Srinagar. Hyderabad unit has started manufacture of lamps and lamp components.

The Central Machine Tools Institute, Bangalore, which went into production in 1965, is the primary research institute in the field of machine tools in the country. Its other functions include designing, standardisation, training and documentation.

The Heavy Machine Tools Plant at the Heavy Engineering Corporation produced machine tools worth Rs 1.92 crores during 1977-78.

Light Electrica Industries

The production of GLS lamps was 1,786 lakh numbers in 1978 as against 1,600 lakhs in 1977. Fluorescent tubes production in 1978 was about 206 lakh numbers as against 176.7 lakhs in 1977.

Heavy Electrical Industries

Apart from Bharat Heavy Electricals Ltd., (BHEL) and some other public sector undertakings under the state governments, there are several large private sector units which are producing a large number of items for the heavy electrical industry. BHEL, which is a central public sector undertaking, was incorporated in 1964, consists of six units, namely, Bhopal, Tiruchirapalli, Hyderabad, Hardwar, Jammu and Bangalore.

In 1979-80, it achieved production of Rs 708 crores as against Rs 443 crores in 1976-77. BHEL is exporting power station equipment to Malaysia and to a number of countries in the West Asia and Africa. During 1978-79, it exported power station equipment worth Rs 120.3 crores.

The Hindustan Cables Ltd., Rupnarainpur, West Bengal began production in 1954. The factory, which is in the public sector, produced 10.85 lakh conductor km of dry core cables, 3,150 tube km of coaxial cables and 76,006 conductor km of plastic wires and cables during 1976-77.

The company's second unit at Hyderabad commenced production in April 1974. It produced 7.68 lakh conductor km of dry core cables during 1976-77.

Instruments

Thirteen units produce industrial process control instruments. The value of production increased from Rs 15 crores in 1977 to Rs 16.34 crores in 1978. Production of scientific surveying optical and mathematical instruments increased from Rs 8.20 crores in 1977 to Rs 11.84 crores in 1978 and that of X-ray and electromedical equipment increased from Rs 5.79 crores to Rs 9.87 crores in the same period. A brief

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

description of the major public sector undertakings manufacturing various types of instruments is given below :

Instrumentation Ltd., Kota, incorporated in 1964, manufactures various industrial process control instruments. It went into commercial production in 1968 and achieved a record turnover of Rs 28.20 crores during 1978-79 as against Rs 19.49 crores in 1977-78. The undertaking is also executing the supply of instrumentation and control systems to certain power plants in Malaysia valued at Rs 3.60 crores.

The National Instruments Ltd., Calcutta, manufactures various types of surveying meteorological scientific and industry instruments. Its production during 1978-79 and 1977-78 was Rs 2.40 and Rs 2.62 crores respectively. Manufacture of cameras and scale reading devices commenced during 1977-78.

Automobiles and Tractors

In 1977-78, production of commercial vehicles including jeeps was 50,180. The others were : passenger cars 34,230; scooters 1,59,030; motor-cycles 68,360. Scooters India Ltd., Lucknow, a public sector undertaking with a capacity of one lakh scooters per annum went into production in 1974-75. It produced 16,717 scooters during 1977-78.

There are 11 units manufacturing tractors. The total output during 1977-78 was 40,920 as against 33,150 in 1976-77.

DRUGS AND PHARMACEUTICALS AND CHEMICALS

Before 1947, most of the bulk drugs were imported and only processing and formulations were done in India. Since then, most of the bulk drugs are manufactured indigenously and the drugs industry has attained the status of a major industry. To reduce the import of bulk drugs and to have an orderly development of the industry, two public sector projects have been set up. A brief description of the undertakings is given below :

Indian Drugs and Pharmaceuticals Ltd.

The Indian Drugs and Pharmaceuticals Ltd., New Delhi was set up in 1961 to manufacture a variety of antibiotics and wide range of drugs from the very basic stages. It comprises the following three units (i) *Antibiotics Plant, Rishikesh* : The plant produces, among others, penicillin, streptomycin, tetracycline and nystatin. Production was 1,89,516 milliards, in 1978-79 as against 2,23,103 milliards in 1977-78. (ii) *Synthetic Drugs Plant, Hyderabad* : It produces a wide range of sulphas, vitamins, analgesics and anti-TB drugs. Production in 1978-79 was 1,192 tonnes as against 1,362 tonnes in the preceding year. (iii) *Surgical Instruments Plant, Madras* : The plant manufactures different types of surgical instruments. Its production during 1978-79 was 6,73,285 instruments as against 4,34,340 instruments in 1976-77.

Expansion of the synthetic drug plant, Hyderabad, involving an investment of Rs 28.56 crores is under implementation.

Establishment of a Plant for the manufacture of Nicofinamide at Muzaffarpur (Bihar) i involving an outlay of Rs 8.58 crores and a formulation plant at Gurgaon (Haryana), costing about Rs 6.93 crores are under implementation.

Three joint ventures, namely, two formulation units one each, in Rajasthan and Uttar Pradesh, and the third in Punjab, to produce glucose and starch are being set up.

Hindustan Antibiotics Ltd.

The Hindustan Antibiotics Ltd., Pune, was incorporated in 1954. It undertakes manufacture of penicillin, streptomycin and vitamin C.

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

The production of penicillin and streptomycine was 137.56 mmu and 100.3 tonnes during 1978-79 as against 75.83 mmu and 86.36 tonnes in the preceding year. The work of a joint sector formulation project near Nagpur has started.

Smith Stanistreet and Pharmaceutical Ltd.

The Company produces only drug formulations at present. The total sales during 1978-79 were of the order of Rs. 531.00 lakhs as against Rs. 431.72 lakhs during 1977-78. Government has approved the expansion of the formulation capacity involving a capital outlay of Rs. 75.58 lakhs and the implementation is in progress.

Hindustan Organic Chemicals Ltd.

The Hindustan Organic Chemicals Ltd., Rasayani (Maharashtra) incorporated in 1960, manufactures various organic chemicals and intermediates required by drugs, dyestuffs and plastic industries. At present, it manufactures 12 chemicals groups. Their production during 1978-79 was 68,835 tonnes as against 68,456 tonnes during 1977-78.

Hindustan Insecticides Ltd.

The Hindustan Insecticides Ltd., New Delhi, incorporated in 1954, is a major producer of insecticides like DDT. It has two factories at Delhi and Alwaye (Kerala). Production of DDT (Technical) at Delhi and Alwaye factories during 1978-79 was 3,118 and 1,357 tonnes respectively. The Alwaye unit also produces BHC and its production during 1978-79 was 1,929 tonnes. The Company is setting up its third unit of Rasayani in Maharashtra for manufacture of DDT and malathion and their formulations.

PETRO-CHEMICALS

Two petro-chemical complexes of the Union Carbide India Ltd., and National Organic Chemicals Ltd., (private sector undertakings) started production in 1967 and 1968 respectively. To step up establishment of petro-chemical complexes around the public sector refineries, the Indian Petro-chemicals Corporation Ltd., (IPCL) was set up at Jawaharnagar in Gujarat in 1969 as a wholly owned company of the Government of India. The DMT unit of its aromatics plant produced 27,071 tonnes of DMT in 1978-79. The xylene plant, which went into production in 1973, produced 19,135 tonnes of orthoxylene, 2,307 tonnes of xylenes and 14,933 tonnes of para-xylenes during 1978-79.

A separate company, Bongaigaon Refinery and Petrochemicals Ltd., registered in 1974 is to implement the refinery and petrochemical complex at Bongaigaon.

FERTILIZERS

The fertilizer industry, in view of its basic importance to the development of agriculture, has been placed in the core sector for industrial licencing purposes. At the time of independence, the industry consisted of only a few plants manufacturing single super phosphate and ammonium sulphate as a by-product from smelter gases. The first large sized plant for the manufacture of nitrogenous fertilizers was set up at Alwave in Kerala in 1947. Subsequently another large sized plant was set up at Sindri in public sector which went into production in October 1951. The industry has since made rapid strides over the years; from a capacity for manufacture of 85,000 tonnes of nitrogen and 63.5 thousand tonnes of P_2O_5 at the beginning of the First Plan (1951-52), the capacity rose to 38.91 lakh tones of nitrogen and 12.30 lakh tonnes of P_2O_5 at the end of 1979.

A large scale programme for augmentation of fertilizer capacity comprising of 9 large sized fertilizer projects is presently under implementation. These projects, when completed would add an additional capacity of 13.89 lakh tonnes of nitrogen and 2.38 lakh

CC-0. Jagamnigam Digital Presevation Foundation, Chandigarh

tonnes of phosphate, raising the total capacity to 52.64 lakh tonnes of nitrogen and 14.58 lakh tonnes of P_2O_5 by 1982-83.

The fertilizer sector being a core sector, the public, private as well as co-operative sectors have been assigned a definite role in its development. There are, at present, 30 large sized nitrogenous complex fertilizer units, besides 33 single super phosphate units. Of the 30 large units, 20 are in the public sector, 9 in the private and 1 in the co-operative sector.

Production of fertilizer in 1978-79 was 21.70 lakh tonnes of nitrogen and 7.7 lakh tonnes of P_2O_5 as compared to 16,000 tonnes of nitrogen and 11,000 tonnes of P_2O_5 in 1951-52.

The Fertilizer Corporation of India and National Fertilizer Limited, two public sector undertakings, have been re-organised into four companies on the basis of feed-stock and geographical considerations. The two new public sector undertakings, namely, Rashtriya Chemicals and Fertilizers and Hindustan Fertilizer Corporation started functioning from 1 April 1978. As a result of this reorganisation, the Fertilizer Corporation of India, which was set up in 1961, now has three operating units, *namely,* sindri modernisation and sindri rationalisation and Gorakhpur. In addition, the Corporation has two more units presently under construction, *namely,* Talcher and Ramagundem.

National Fertilizers Limited presently has four operating units, *namely,* Nangal and Nangal Expansion, Bhatinda and Panipat.

Hindustan Fertilizer Corporation Limited, which came into being from 1 April 1978, has operating units at Durgapur, Barauni, Namrup and Namrup Expansion, besides being engaged in the implementation of Haldia project in West Bengal.

Rastriya Chemicals and Fertilizers Limited, anohter public sector company, which came into being from 1 April 1978, is operating two units *namely,* Trombay and Trombay IV and is also incharge of Trombay V which is presently under construction.

Fertilizers and Chemicals Travancore Limited (FACT) has three operating units in Kerala, *namely,* Udyogamandal (Alwaye), Cochin I and Cochin II.

Madras Fertilizers Limited, another public sector company, which was formed as a joint venture in 1966, has one operating unit at Madras.

The two public sector undertakings which are under the control of the Department of Steel and Department of Mines, *namely,* SAIL, Rourkela and Neyveli Lignite Corporation, Neyveli, are also engaged in the production of fertilizers.

Rourkela plant is producing calcium ammonium nitrate based on coke oven gas and naphtha. Neyveli Lignite Corporation is presently using lignite as feedstock for production of urea but it is currently implementing a scheme for changeover of feedstock from lignite to fuel oil.

Hindustan Copper Limited, another public sector undertaking under the Department of Mines, also has one operating fertilizer unit at Khetri which is producing triple super phosphate.

Indian Farmers Fertilizer Cooperative, a Society in cooperative sector, is also engaged in the production of fertilizers at Kalol and Kandla in Gujarat. Besides, the Society is implementing another fertilizer project at Phulpur.

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

The major units in the private sector are at Kanpur, Kota, Goa Visakhapatnam, Tuticorin, Baroda, Mangalore, Ennore and Varanasi. Expansion schemes of Kanpur and Tuticorin units are under implementation.

The planning and development division of erstwhile Fertilizer Corporation of India has now been formed into a separate consultancy organisation, by name, Fertilizers (Planning and Development) India Limited with a view to giving the maximum impetus to its working. Fertilizer (P&D) India Ltd. holds licences for process know-how from abroad and also developed certain processes of its own. In the field of catalysts, the organisation has acquired noteworthy competence. Fertilizer (P&D) India Limited, FACT Engineering and Design Organisation (FEDO) of FACT and Engineers India Limited (EIL) have acquired capability in the fields of detailed feasibility reports, civil erection and instrumentation works, detailed engineering, follow up and inspection etc. The country has developed a wide and diversified base for manufacture of sophisticated equipments for fertilizers. Bharat Heavy Plates and Vessels Limited and Bharat Heavy Electricals Limited are now producing a wide range of plants and equipments used in the fertilizers and allied chemical plants.

MINING AND MINERALS

MINERAL RESOURCES

India is richly endowed with minerals. The estimated deposits of some of the principal minerals found in the country are given below :

Apatite and Phosphorite

Apatite deposits of commercial importance exist in the Singhbhum district of Bihar, Vishakhapatnam district of Andhra Pradesh and Purulia district of West Bengal. Deposits of phosphorite are located in Madhya Pradesh, Rajasthan and Uttar Pradesh. They have been estimated at about 14.4 crore tonnes.

Bauxite

Important deposits occur in Bihar, Goa, Gujarat, Jammu and Kashmir, Karnataka, Madhya Pradesh, Maharashtra, Orissa and Tamil Nadu. Promising reserves have been located in Andhra Pradesh, Goa, Kerala, Orissa, and Uttar Pradesh. The reserves of bauxite of all grades have been estimated at 240.3 crore tonnes.

Coal and Lignite

Vast deposits of coal of Gondwana formation occur in Andhra Pradesh, Bihar, Madhya Pradesh, Maharashtra, Orissa and West Bengal and of the tertiary formation in Arunachal Pradesh, Assam, Meghalaya, Jammu and Kashmir and Nagaland. The overall reserves of coal, both coking and non-coking have been estimated at 8,577 crore tones. Of these, the reserves of coking coal in the Gondwana coalfields alone are about 1,940 crore tonnes.

Significant reserves of lignite occur in Gujarat, Jammu and Kashmir, Rajasthan and Tamil Nadu. The total estimated reserves are about 210 crore tonnes, of which Neyveli field in Tamil Nadu alone contains 192 crore tonnes.

Chromite

Deposits of economic significance occur in Bihar, Karnataka, Maharashtra, Orissa and Tamil Nadu. The total reserves of *in situ* chromite, including lump and fine varieties, are about 1.73 crore tonnes.

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

Copper Ore The important copper ore bearing areas are Agnigundala in Andhra Pradesh, Chitradurga, Kalyadi and Thinthini in Karnataka, Singhbhum Mosabani and Rakha in Bihar, Malanjkhand in Madhya Pradesh and Khetri and Dariba in Rajasthan. Besides, minor deposits are also known in Gujarat, Orissa and Sikkim. The aggregate reserves have been estimated at about 40 crore tonnes, with a total metal content of 50.8 lakh tonnes.

Diamond The Panna diamond belt, the only diamond producing area in the country is spread over the districts of Panna, Chhatarpur and Satna (only some parts) in Madhya Pradesh as well as some parts of Banda district of Uttar Pradesh. The diamond field in the south is spread over the districts of Anantapur, Cuddapah, Kurnool and Krishna in Andhra Pradesh and Bellary in Karnataka. Incidence of Kimberlitic pipe rock has been noticed for the first time in Jungel area of Mirzapur in Uttar Pradesh.

Gold There are three important groups of gold mines in the country, *viz.*, Ramagiri gold field, Anantapur district, Andhra Pradesh; Kolar gold field, Kolar district, and Hutti mines, Raichur district, in Karnataka, Karnataka is the only gold producing state in the country. The estimated gold ore reserves in Karnataka are about 41,690 kg.

Gypsum Deposits of gypsum are estimated at 120.45 crore tonnes in the country of which Rajasthan, Jammu and Kashmir and Tamil Nadu have 107.18, 10.50 and 1.77 crore tonnes respectively.

Ilmenite It occurs mainly in the eastern and western coasts of India, associated with the beach sands. Of the workable deposits of this type, those in Kerala, Orissa and Tamil Nadu are important. Total inferred reserves of ilmenite in beach sands have been put at over 13.8 crore tonnes.

Iron Ore Large deposits occur in Bihar, Goa, Karnataka, Madhya Pradesh, Maharashtra, Tamil Nadu and Orissa. The estimated reserves of hematitic ore, containing 55 per cent and more of iron, are about 1,016.6 crore tonnes. Besides this, about 468.2 crore tones of magnesite ore reserves with 25 to 62 per cent iron content have also been estimated.

Lead Zinc Ore The known reserves of lead-zinc ore are located in Gujarat and Rajasthan. Lead ore deposits are known to exist at Agnigundala in Andhra Pradesh and Sargipalle in Orissa. The total reserves have been estimated at about 21.2 crore tonnes and in terms of metal content at 1.2 crore tonnes.

Manganese Ore Rich deposits of manganese ore are located in Andhra Pradesh, Goa, Karnataka, Madhya Pradesh, Maharashtra and Orissa. The total measured, indicated and inferred reserves are 8 crore tonnes.

Mica Economic deposits of mica are found in three important belts in Andhra Pradesh, Bihar and Rajasthan.

Nickel Ore Nickel ore is found in the Cuttack and Mayurbhanj districts of Orissa. The total reserves are placed at 5.81 crore tonnes of which 4.087 crore tonnes are estimated in Kansa block and 1.34 crore tonnes in Saruabil-Sukarangi area.

Oil The potential oil-bearing areas are located in Assam, Tripura, Manipur, West Bengal, Ganga Valley, Punjab, Himachal Pradesh, Kutch,

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

eastern and western coastal areas (in Tamil Nadu, Andhra Pradesh and Kerala), Andaman and Nicobar Islands, Lakshadweep and in the offshore areas in the continental shelf.

Refractories

Important deposits of Magnesite are found in Karnataka, Salem district, (Tamil Nadu) and Almora district (Uttar Pradesh). The estimated reserves of sillimanite are about 3.5 lakh tonnes, of which nearly 2.5 lakh tones are in Sonapahar area of Meghalaya and 1 lakh tonnes in Pipra area of Madhya Pradesh. In the beach sands of Kerala and Tamil Nadu the reserves of sillimanite bearing sands are estimated at 1.3 crore tonnes with about 5 per cent sillimanite. Total estimated reserves of kyanite are 34 lakh tonnes which is found in Bihar, Karnataka, Maharashtra and Orissa. The kyanite deposit around Lapsa Buru in Singhbhum district of Bihar is the largest deposit of its kind in the world.

Airbrone Mineral Surveys and Exploration

To accelerate the search for base metal deposits in the country, the Government of India launched two airborne geophysical surveys, namely 'Operation Hardrock' and BRGM/CGC project in 1967 and 1971 respectively.

Follow up explorations carried out after surveys indicate base metal deposits in Andhra Pradesh, Bihar, Rajasthan, Karnataka and Maharashtra.

Mineral Production

The value of mineral production (excluding atomic minerals) increased considerably during the last two decades, from Rs 165.1 crores in 1960 to Rs 1,469.5 crores in 1978. The share of fuels group was the largest, Rs 1,080.6 crores, followed by non-metallic minerals Rs 197.4 crores production and index from 1971 to 1978 are given in table 18.9. The data on quantity and value of mineral production (by minerals) during 1977 and 78 are given in table 18.10.

TABLE 18.9
VALUE OF MINERAL PRODUCTION

Year	1971	1972	1973	1974	1975	1976	1977	1978[1]
1. Value of mineral production (Rs. crores)	503·0	541·7	574·2	863·9	1,227·4	1,331·1	1,415·3	1,469·5
2. Quantity index of mineral production (Base 1970=100)	101	105	107	114	129	138	141	143

[1]Provisional, includes the estimated value for minor minerals

TABLE 18.10
QUANTITY AND VALUE OF MINERAL PRODUCTION

Minerals	(Unit)	1977		1978[1]	
		Quantity	Value (Rs. 000)	Quantity	Value (Rs. 000)
1	2	3	4	5	6
All Minerals (Total Value)			1,41,52,922		1,4694,762
Fuel (Total value)			1,02,77,194		1,0806,342
Coal	,000 tonnes	1,00,247	70,71,091	101,549	7,153,417
Lignite	,,	3,632	1,99,740	3,613	1,97,799

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

1	2	3	4	5	6
Natural gas[2]	million cu. mts.	1,631	56,966[3]	1,381	52,620[3]
Petroleum[4] (crude)	'000 tonnes	10,185	2,949397[3]	11,251	34,02,506[3]
Metallic Minerals					
(Total value)			19,25,358		19,14,789
Bauxite	tonnes	15,18,685	45,949	16,59364	61,339
Chromite	,,	352,535	168,673	2,66,048	1,29,495
Copper ore	,,	25,51,238	298,673	2,132,634	255,509
Diaspore	,,	7,900	1,366	5,718	1,479
Gold	Kilogram	3,014	169,697	2,774	178,141[3]
Iron ore	'000 tonnes	42,598	915,925	38,445	923,851
Lead Concentrates	tonnes	16,744	35,547	16,893	37,520
Manganese Ore	,,	18,65,052	1,85,570	16,09,830	1,72,714
Silver	kilogram	13,228	14,768	12,084	15,706
Tungsten Concentrates	,,	43,115	3,412	40,749	3,783
Zinc concentrates	tonnes	46,113	85,778	66,019	126,250
Non-metallic Minerals					
(Total value)	,,		19,50,370		19,73,633
Agate	tonnes	1,768	437	2,275	435
Apatite	,,	35,361	6,686	29,560	5,380
Phosphorite	,,	7,04,961	173,286	757,047	187,921
Asbestos	,,	22,177	7,959	22,980	9,593
Ball Clay	tonnes	48,369	1,295	38,175	1,083
Barytes	,,	3,30,989	19,981	3,78.928	20,042
Calcite	,,	27,445	2,016	27,789	1,078
Chalk	,,	66,414	3,002	74,268	4,372
Kaolin (total)	,,	444,827	25,467	4,54,178	28,340
Kaolin (natural)	,,	3,49,143	7,316	3,49,101	7,260
Kaolin (Processed)	,,	95,684	18,151	1,05,077	21,080
Clay (others)	,,	1,29,249	647	71,099	692
Corundum	,,	1,306	712	1,082	501
Diamond	carat	18,297	12,396	15,902	7,841
Dolomites	tonnes	2,151,95	74,213	19,62,449	72,042
Emerald (crude)	carat	550	ND	35,085	N.D
Felspar	tonne	54,710	1,656	49,946	1,536
Fire clay[5]	,,	7,25,583	13,001	7,25,291	13,226
Fluorite (concentrate)	,,	15,209	24,586	13,901	21,600
Fluorite (graded)	,,	3,586	4,923	3,446	4,772
Garnet (abrasive)	,,	1,825	188	2,467	300
Garnet (gem variety)	kilogram	5,529	52	4,912	43

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

1	2	3	4	5	6
Graphite (r.o.m.)	tonnes	48,455	4,767	62,389	5,799
Gypsum	,,	7,77805	16,767	8,81,910	19,098
Jaspar	,,	1,450	88	1,389	87
Kyanite	,	42,123	12,345	28.477	8,789
Andalusite	,	387	57	225	72[6]
Limestone	'000 tonnes	30,380	6,26,035	30,710	6,25,008
Limekankar	tonnes	2,64,661	2,801	2,23,342	2,373
Limeshell	,,	93,400	4,533	1,21,561	6,085
Calcareous sand	',	8,97,629	2,602	9,32,350	3,154
Magnesite	,,	4,02,007	50,058	4,13,918	54,220
Mica (crude)	tonnes	9,352	23577	9,460	24,854
Mica (waste)	,,	5,319	N.A·	4,537	N.A.
Ochre	,,	75,935	1,874	91,336	2,325
Pyrites	,,	31,085	7,809	63,781	13,826
Sulphur	,,	8,041	4,925	8,197	4,929
Pyrophyilite	,,	34,619	1,086	34,312	1,093
Quartz	,,	1.87,999	4,082	1,89,543	4,439
Fuchsite Quartzite	tonnes	107	116	60	51
Quartizite	,,	1,81,083	5,446	1,83,888	4,707
Sillica Sand	,,	5,61,228	11.504	6,29 524	12,737
Moulding Sand	,,	99,917	674	84,616	567
Salt (rock)	,,	3,759	639	4,281	769
Sand (others)	,,	10,15,590	4,023	9,66,442	3,348
Sillmanite	,,	15,023	5,071	13.483	4,529
Slate	,,	21,826	3,212	15,201	2,150
Steatite	,,	2,46,601	11,526	2,90234	15,765
Staurolite	,,	19	11	2	1
Vermiculite	,,	2,878	210	1,966	170
Wollastonite	,,	3,330	213	1,928	75
Minor minerals (value)			N.A.		N.A.

[1]Provisional.

[2]Including the production from Bombay-High Off-shore for 1978.

[3]Estimated.

[4]Including the production from Bombay-High Off-shore for 1977 and 1978.

[5]Excludes the production of Fire-clay, if any, recovered incidential to coal mining.

[6]Under reference.

NA.—Not available

N.D.—Not determined

SOME ORGANISATIONS

Several public sector organisations are functioning in the country for the mapping and exploration of minerals, research and exploitation of minerals. Some of the organisation are described below :

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

Geological Survey of India

The Geological Survey of India (GSI), Calcutta, is the principal agency for mapping and exploration of minerals. During 1978-79, it carried out systematic mapping around 64,300 sq km of hard-rock terrain and 44,900 sq km of quternary formations in different parts of the country and for mineral exploration about 1,08,900 metres of drilling was carried out. About 5,867 sq km was covered by large scale and detailed mapping to delineate the potential mineralised zones.

Mineral Exploration Corporation

The Mineral Exploration Corporation (MEC) was formed in 1972 for carrying out detailed mineral exploration, and for providing consultancy and expert services in turn-key projects. It carried out 6.68 lakh metres of drilling, 29,000 metres of mining and 16,700 cubic metres of trenching till 31 January 1980 since its inception for exploration of various mineral deposits in the country.

Indian Bureau of Mines

The Indian Bureau of Mines was established in 1948. It carries out research on benefication of low grade ores and analysis of ores and minerals. Anothr important function is collection and publication of mineral information and statistics. It also assists the central government in the formulation of its mineral policy and carries out market surveys for mineral commodities in national and international markets. It provides technical consultancy services to the mining industry.

National Mineral Development Corporation Ltd.

The National Mineral Development Corporation Ltd., (NMDC) Hyderabad, was set up in 1958 for exploitation of minerals other than oil and natural gas and coal.

With the passing of the Public Sector Iron and Steel Companies (Restructuring) and Miscellaneous Provisions Act, 1978, the National Mineral Development Corporation Limited, Hyderabad, is no more a subsidiary of Steel Authority of India Limited, and has now become an undertaking of the central government from 1 May 1978. However, the Kiriburu Iron Ore Project developed by the NMDC and Meghahatuburu Iron Ore Project under development, which were with the NMDC earlier, have now been transferred to the Bokaro Steel Plant under the aforesaid Act.

The NMDC, with the present set up, is concerned with the management of iron ore mines already developed by them at Bailadila Deposit No. 14, Bailadila Deposit No. 5 in Madhya Pradesh, and Donimalai Mine in Karnataka. In addition, the Corporation has, also developed the diamond mines at Panna in Madhya Pradesh. The iron ore produced from the existing mines of the NMDC is earmarked for export, except the Donimalai mine for which a specific market is being found.

The NMDC has also drawn up proposals for the setting up of pellet plants of capacity of 20 lakh tonnes each, based on Bailadila iron ore mines and Donimalai mines. A number of feasibility studies have also been undertaken by the NMDC, with a view to find out suitable deposits of iron ore for development in due course.

The production of iron ore during 1978-79, was 3.85 crore tonnes, of which 70 lakh tonnes was produced by the NMDC. Against this, the export during 1978-79 was 2.95 crores tonnes valuing Rs 238.77 crores.

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

Bharat Aluminium Company Ltd.

The Bharat Aluminium Company Ltd., New Delhi, was set up in 1965 to implement two aluminium projects : (i) a 50,000 tonne per annum integrated aluminium project in the Ratnagiri area of Maharashtra, and (ii) a 1,00,000-tonne integrated aluminium project at Korba in Madhya Pradesh. The first stream of the Korba Alumina Plant was commissioned in April 1973. The first phase of the smelter was commissioned in May 1975 and the second phase in September 1977. The third and fourth phases are ready but could not be commissioned due to lack of power supply.

Hindustan Copper Ltd.

The Hindustan Copper Ltd., Calcutta, is responsible for developing the copper deposits in the country. The projects of the company are the Khetri, Chandmari and Dariba copper projects in Rajasthan, Indian copper complex at Rakha in Bihar, and Malanjkhand copper project in Madhya Pradesh. All the projects of the company except Malanjkhand are in production.

The Hindustan Copper Ltd., produced about 21,888 tonnes of blister copper metal in 1978-79.

Bharat Gold Mines Ltd.

The Bharat Gold Mines Ltd., Oorgaum, Karnataka, took over the management of the Kolar Gold Mining Undertaking, a departmental undertaking, from 1 April 1972. Production of gold in 1978-79 was 17.92 lakh gm as compared to 19.41 lakh gm in 1977-78.

ZINC AND LEAD

There are at present three zinc smelters in the country, two operated by the Hindustan Zinc Ltd., in the public sector and the other by Cominco Binani Zinc Ltd., in the private sector. The public sector smelters are at Debari (Rajasthan) and Vishakhapatnam (Andhra Pradesh), the private sector smelter at Alwaye (Kerala). The total installed capacity of the three smelters is 95,000 tonnes per annum. An expansion programme of the zinc smelter at Debari is under way to increase its capacity from 18,000 to 45,000 tonnes per annum.

There are two lead smelters in the country, operated by public sector Hindustan Zinc Ltd., one at Tundoo (Bihar) and the other at Vishakhapatnam. Tundoo Lead Smelter has a capacity of 8,000 tonnes per annum. The Zinc-Lead Smelter at Vishakhapatnam has an installed capacity of 10,000 tonnes of lead per annum, which is proposed to be increased to 22,000 TPA. The lead concentrates produced at Company's mines in Rajasthan/Orissa and Agnigundala in Andhra Pradesh is used in lead smelters.

To develop zinc and other allied metals, the Hindustan Zinc Ltd., a central government undertaking, was set up in 1966 at Udaipur Rajasthan. It is one of the only two zinc producers and the only producer of lead in the country. There are seven constituent units of the undertaking, *namely,* (i) Zawar mines, Rajasthan, (ii) zinc smelter Debari, Rajasthan, (iii) lead smelter, Tundoo (Bihar), (iv) Rajpura Dariba mines, (v) zinc smelter, Vishakhapatnam (Andhra Pradesh), (iv) Sargipalli mine project (Orissa) and (vii) Agnigundala lead mines (Andhra Pradesh).

The Bhotang deposits in Sikkim are being worked by Sikkim Mining Corporation, a company owned by the Government of India and Sikkim Government.

Indigenous production of zinc and lead in public sector during 1978-79 was 51,186 and 10,475 tonnes respectively.

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

PLANTATION INDUSTRIES

Tea, coffee and rubber plantation together cover only about 0.4 per cent of the cropped area; yet tea is one of the largest foreign exchange earners for the country. These industries, concentrated largely in the north-east and along the south-west coast, employ over 12 lakh workers.

TEA

The production of tea in 1977-78 was the highest ever recorded. It was 56 crore kg. The production during 1976-77 was 51.2 crore kg. Export earnings from tea in 1977-78 totalled Rs 514.82 crores as compared to Rs 293.14 crores during 1976-77.

Instant Tea

During the past few years there has been an increase in the production and export of instant tea. The exports of instant tea were of the order of four lakh kg in 1977-78 valued at Rs 228 crores. The unit value increased from Rs 45.50 in 1976-77 to Rs 57 during 1977-78.

The Tea Board, which is the principal agency for the development of the tea industry, is implementing a number of schemes to increase production. These include long-term loans to tea estates, provision of facilities for acquiring machinery on hire-purchase basis and grant of subsidy to the industry for replanting over-aged tea bushes. A Tea Trading Corporation at Calcutta has also been set up which markets Indian tea in consumer packs in certain selected countries.

COFFEE

Production of coffee during 1977-78 was about 1,02,500 tonnes, comprising 65,000 tonnes of Arabica and 37,500 tonnes of Robusta. The exports of coffee were of the order of Rs 182.74 crores in 1977-78 as against Rs 125.75 crores in 1976-77.

The Coffee Board, which is responsible for the development of coffee industry, has undertaken a coffee development plan to improve the yield and quality of coffee. For this purpose, it advances loans to coffee growers.

CARDAMOM

India is the largest exporter of cardamom and accounts for 70 per cent of the world trade. Production in 1977-78 was about 4,600 tonnes. Export earnings during 1977-78 were valued at Rs 47 crores as against Rs 19.0 crores in 1976-77. The year 1977-78 registered a record in the history of cardamom industry by remarkable performance in production, exports and prices.

RUBBER

The production of natural rubber during 1977-78 was 1,47,000 tonnes as against 1,50,000 tonnes during 1976-77. The drop in production was due to strikes and climatic conditions in certain plantations. Owing to increased indigenous availability of rubber, the Government of India had banned the import of natural rubber from 1973-74. However, during 1977-78 and in recent months of the current year, the government allowed the import of 15,000 tonnes of rubber by the State Trading Corporation to meet the deficit.

The Rubber Board assists the industry in its problems and decides on major issues pertaining to it. It introduced a replanting subsidy scheme in 1957, under which more than Rs 8 crores were granted as subsidy so far.

VILLAGE AND SMALL INDUSTRIES

Although there has been an impressive development of large-scale

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

industries during the three decades of planned development, India still remains predominantly a country of village and small industries. About two crore persons are engaged in these industries, of whom nearly 90 lakhs work in the handloom industries, i.e., more than the total number of persons employed in the organised industries and mining put together.

The small-scale and village industries sector covers a wide range of traditional and modern small-scale industries including handloom, khadi powerloom, sericulture, coir, handicrafts, village industries and mechanised small-scale indusrties.

Development

Long before the Industrial Revolution in the West, India was known as the industrial workshop of the world. Indian textiles, calicoes, muslins and metalware were prized abroad. Under the British rule, however, these flourishing industries suffered rapid decay, for, they had to make room for the mass-produced British goods.

It was after independence that action was initiated to solve their age-old problems, such as, lack of credit facilities, outmoded methods and techniques, absence of organised marketing, unsatisfactory arrangements for the supply of raw materials and competition from large-scale units. The union government set up a number of agencies to help the village and small industries. These include the Small Scale Industries Board, the Khadi and Village Industries Commission, the All India Handicrafts Board, the All India Handloom Board, the Coir Board and the Central Silk Board. Apart from this, credit facilities are made available to these industries through a number of institutions. Industrial estates and rural industrial projects have been set up and industrial co-operatives have been organised. State Directorates of Industries and other agencies are responsible for their development in the states.

To determine the requirement of the small-scale sector for framing suitable policy for further development, a national census of small-scale industries, planned and organised by the Small Industries Development Organisation with the participation of the state directorates of industries, was completed during 1975-76. The census operations covered all the small-scale industries (2,99.186) within the purview of SIDO. A data bank cell had started functioning in SIDO which is likely to grow into a centralised agency for collection, maintenance and dissemination of data regarding the small scale sector.

From 1 May 1975 the central government had revised the definition of the small-scale industries to cover "undertakings having investments in fixed assets in plant and machinery not exceeding Rs 10 lakhs and in the case of ancillary industries Rs 15 lakhs". Apart from the increase in the monetary ceiling the new definition for ancillaries involves changes in the following important respect : (i) units producing intermediates are not be recognised as ancillaries (ii) units providing servicing facilities i.e. sand-blasting pressure cleaning, grinding, etc., are to be recognised as ancillaries (iii) the concept of "parent" unit now includes small scale industries also. Thus one small industry can function as ancillary to another and (iv) a unit to be recognised as ancillary should supply or propose to supply at least 50 per cent of its production to one or more parent units.

Expenditure under Plans

During the first three Plans, Rs 458.76 crores were spent by the central and state governments for the development of village and small indust-

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

tries. The expenditure during the Annual Plans (1966-69) was Rs 132.55 crores. In the Fourth Plan, the expenditure was Rs 251.01 crores as against the outlay of Rs 293 crores. The Fifth Plan outlay for the development of these industries was Rs 535.03 crores and estimated expenditure is Rs 387.79 crores. The Sixth Plan outlay is Rs 1,410 crores.

SMALL-SCALE INDUSTRIES

The number of small-scale units registered on a voluntary basis with the industries directorates of different states and union territories constitute 90 per cent of the total registered factories and account for about 40 per cent of total production in the registered manufacturing sector. Their output was worth about Rs 13,200 crores in 1977-78. Apart from the quantitative growth, there has also been a significant increase in the variety of products manufactured by these units. Small-scale sector has ventured into many new and sophisticated fields of production which include TV sets, cardiac pacemakers, ECG machines and hearing aids. They also supply parts and components to large-scale industries engaged in the manufacture of machine tools, bicycles, automobiles, electrical appliances and machinery. To encourage the small-scale sector, the central government has reserved 807 items for exclusive production in the sector. The small-scale sector manufactures over 2,500 products.

Credit Facilities

Small-scale sector is included in the priority sector for the supply of institutional credit. It receives financial assistance from state governments, state financial corporations and banking institutions. Scheduled commercial banks extended credit to 5.58 lakh units by 31 December 1978 amounting to Rs 2,765.65 crores, in terms of amounts outstanding was Rs 2,156.31 crores. The state financial corporations granted term loans amounting to Rs 63.77 crores during 1977-78.

Import Policy for 1979-80

Import licences for raw-materials, components consumables and spares to small scale industrial units, including cottage industry units would be issued for import against free foreign exchange.

On the basis of the recommendations of the concerned sponsoring authorities, new/proposed units in the small scale sector will be eligible to get import licences, covering their requirements for 12 months in respect of items which are mentioned in the banned, restricted lists but excluding those which are absolutely banned under the Import Policy, 1979-80. The maximum value of any such licence in the case of small scale units will be rupees three lakhs.

In case of industries set up in backward areas or by the graduates/diploma holders in professional subjects or by ex-servicemen/persons belonging to scheduled castes/scheduled tribes, the maximum value of the licence shall be Rs 5 lakhs in respect of new or proposed small scale units instead of the normal rupees three lakhs. Such units would be required to pay earnest money at the rate of 1 per cent (instead of 2 per cent as in other case) of the sale value of the quantity of the material registered with the canalising agency, or Rs 50,000 whichever is less. New units in these categories can register their requirements with the canalising agencies concerned covering a period of 15 months (instead of 12 months normally permissible) so that such units have extra stock for 3 months at the start of operation.

Small Industries, Development Organisation

Technical advice and assistance to small-scale manufacturers is provided by the Small Industries Development Organisation through its

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

network of 25 service institutes, 18 branches institutes, 41 extension, 5 production and 3 training centres. The organisation also provides common service and tool room facilities in workshops attached to small industries, service institutes and extension centres. It conducts courses in management and technical disciplines. During 1978-79, it provided technical assistance to 1.31 lakh entrepreneurs and others.

Two new centres, namely, the Central Institute of Tool Designs, Hyderabad and the Institute for Design Electrical Measuring Instruments, Bombay are providing technical guidance and training to entrepreneurs.

Four Regional Testing Centres are set up at New Delhi, Calcutta, Bombay and Madras for providing testing facilities in mechanical, metallurgical, chemical and electrical trades. Besides, two new tool rooms at Calcutta and Ludhiana have been set up.

National Small Industries

The National Small Industries Corporation, which was set up in 1955, operates the scheme of procuring machinery for small-scale manufacturers on a hire-purchase basis on concessional terms. It also assists the small-scale sector in processing orders from government departments and agencies. The Prototype Development and Training Centres set up with American, West German and Japanese assistance at Rajkot, Okhla (Delhi) and Howrah impart training to persons engaged in small-scale industries.

Industrial Estates

Several industrial estates have been set up all over the country to accommodate small industrial units in more congenial atmosphere where various common facilities are provided for their smooth working. On 31 March 1975, 12,380 small-scale units were working. They produced goods worth Rs 500 crores and provided employment to about 1,85,500 persons.

District Industries Centre

The District Industries Centre (DIC) is an institution at the district-level to provide under one roof, all the services and support required by small and village entrepreneurs. A plan for such centres was outlined in the industrial policy statement placed before Parliament on 23 December 1977. It aims at removing unemployment, disparities between rural and urban areas and the increasing incidence of industrial sickness.

The DIC undertakes economic investigation of the potentials for development of the district, including its raw materials and other resources, supply of machinery and equipment, provision of raw materials, effective arrangements for credit facilities, marketing assistance, quality control, research, extension and entrepreneurial training. The government's intention is to make district industries centre an operational mechanism for according sanction and other facilities for setting up industries in rural areas and ensuring their continued viable operation, by developing close linkage with the rural development blocks on the one hand and the specialised development institutions on the other. Institutions like Khadi and Village Industries Commission, All India Handicrafts Board, All India Handloom Board, the Coir Board and the Central Silk Board which are involved in grass-root activities, would work through the district industries centre and integrate their activities with the DIC set-up.

The new scheme is a centrally sponsored programme and is to be implemented by the states and union territories as per the guidelines

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

issued by the central government. With the introduction of the DICs the present rural industries project set up in the RIP districts has been merged in the DIC. The staff existing under the RIP scheme, would be integrated with the DIC staff. In all the district industries centres, RIP and RAP (Rural Artisans Project) components and facilities would be made available. About 372 district industries centres have been sanctioned so far. To minitor the programme, central, regional state and district-level committees have been set up.

HANDLOOMS AND POWER-LOOMS

The handloom industry ranks in importance next only to agriculture in employment potential. There are about 38 lakh handlooms, of which 12.7 lakhs are in the co-operative sector. About 100 lakh persons depend on this industry for their livelihood. Powerloom industry is of recent growth. There were four lakh power operated looms in the country as on 31 December 1977.

A target of 600 crore metres—370 crore metres for handlooms and 230 crore metres for powerlooms—has been fixed for the Sixth Plan period. This amounts to about 50 per cent of the total requirement of cloth in the country.

The handloom industry has achieved an important position in exports, which increased from Rs 11.60 crores in 1967-68 to about Rs 240 crores in 1977-78.

Development of handloom sector has been given a prominent place in the new economic programme. A comprehensive programme for its all-round development has been undertaken with the commencement of the Central Plan for handloom development. A Development Commissioner has been appointed. Some state have constituted Handloom Development Corporations.

HANDICRAFTS

Handicrafts include a large number of crafts which are backed by centuries of experience and skill. The present production of handicrafts (including gem and jewellery) is Rs 400 crores and was expected to reach Rs 600 crores during 1978-79. As a result of the various development and export promotion efforts, exports picked up from Rs 22.18 crores in 1967-68 to about Rs 169.82 crores in 1976-77. However, exports showed a fall of Rs 14 crores in 1977-78 as compared to the previous year. Steps are being taken to check the trend.

In addition to its contribution to exports, the handicrafts sector employs 14 lakh workers. The number was expected to reach 18 lakh by 1978-79. To promote the development of handicrafts, larger allocations are being made in the central sector. Training programmes are also being organised at important centres.

To increase the production and exports of handicrafts, an All India Handicrafts Board was set up in New Delhi in 1952. It has five regional offices at Bombay, Calcutta, Lucknow, Madras and New Delhi. A Central Handicrafts Development Centre at Bangalore and a Central Crafts Museum at Delhi have also been set up by the Board. For marketing of handicrafts, about 250 emporia have been set up all over India by the central and state governments and administrations of union territories.

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

19 COMMERCE

EXTERNAL TRADE

Before independence, India had a pattern of trade which was traditionally that of a colonial and agricultural country. The bulk of her foreign trade was confined to Britain and other Commonwealth countries. While exports were based on a few primary commodities, imports were restricted and consisted mainly of manufactured articles. Though, on the surface, there was a favourable balance of trade, it concealed a low level of industrial production and economic development.

With the impressive industrial development since independence, India's foreign trade has undergone a complete change and is no longer confined to a few countries trading in a few commodities. She, now, has trading links with practically all the countries of the world. The items on the exports list today number about three thousand as against fifty at the time of independence.

Similarly, there has been a great increase in imports on account of the development needs of the economy. The composition of imports has, naturally, undergone a great change. The bulk of the imports now consists of sophisticated machines, scarce raw materials, lubricants and oils and fertilizers which are essential for the country's industrial and agricultural development. The country has had an adverse balance of trade mainly on account of heavy imports necessary for its development.

VALUE OF FOREIGN TRADE

The total value of foreign trade (imports plus exports including re-exports) during 1978-79 was Rs 12,528.39 crores as compared to Rs 11,429.55 crores in 1977-78. The value of imports and exports, the total value of foreign trade and the balance of trade for selected years since 1950-51 are given in table 19.1.

TABLE 19.1 FOREIGN TRADE OF INDIA

(*Rs crores*)

Year	Imports	Exports (including re-exports)	Total value of foreign trade	Balance of trade
1950-51	650·21	600·64	1,250·85	−49·57
1960-61	1,139·69	660·22	1,799·91	−479·47
1965-66	1,408·53	805·64	2,214·17	−602·89
1970-71	1,634·20	1,535·16	3,169·36	−99·04
1973-74	2,955·37	2,523·40	5,478·77	−432·97
1974-75	4,518·78	3,328·83	7,847·61	−1,189·95
1975-76	5,265·20	4,042·25	9,307·45	−1,222·75
1976-77	5,073·79	5,142·25	10,216·04	+68·46
1977-78	6,025·29	5,404·26	11,429·55	−621·03
1978-79	6,803·23	5,725·16	12,528·39	−1,078·07

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

The adverse balance of trade, which had been widening since 1954-55 owing to an increase in imports needed to meet the requirements of development and a relatively slower growth of exports showed a generally upward tendency till 1967-68. This trend was reversed in 1968-69, and in the subsequent years up to 1970-71 there was a sharp decline in the country's trade deficit. But again there was a substantial increase in imports during 1971-72 resulting in a fairly heavy deficit in the balance of trade that year. In 1972-73, however, as a result of an appreciable increase in exports, the balance of trade turned into a favourable one for the first time during the last 26 years. Again in 1973-74, the trade turned into deficit and continued to rise up to 1975-76 mainly due to faster growth in imports than exports. During this period, there were difficult trading conditions in the international markets due to recessionary tendencies and protectionist policies followed by developed market economies.

It was once again in 1976-77 when India's trade was in surplus to the extent of Rs 68.46 crores due to faster growth in the exports and a slight fall in imports.

During 1978-79, India's imports increased over the previous year resulting in an adverse balance of trade to the extent of Rs 1,078.07 crores.

PATTERN OF TRADE

Exports, which had been more or less stagnant during the decade 1951-60, averaging a little over Rs 600 crores per annum, started increasing between 1961 and 1966. On 31 March 1966, exports stood at about Rs 806 crores. There has been an impressive increase in exports since then. In 1978-79, exports totalled Rs 5,725.16 crores.

EXPORTS

The exports have not only gone up but also witnessed an increasing diversification in recent years. The increase has been well spread over a number of commodities. Among the important items, exports of cotton manufactures went up from Rs 48.2 crores in 1961-62 to Rs 345 crores in 1978-79, iron ore and concentrates from Rs 17.4 crores to Rs 233.00 crores, unmanufactured tobacco from Rs 14.0 crores to Rs 111 crores and iron and steel from Rs 10 crores to Rs 115 crores. Exports of jute manufactures which were at the level of Rs 226.0 crores in 1973-74 increased to Rs 294.0 crores in 1974-75 and then declined to Rs 250.8 crores in 1975-76 and further to Rs 201 crores in 1976-77. However, export of jute goods picked up once again in 1977-78 and amounted to Rs 244.8 crores. But in 1978-79, it again fell down to Rs 166.5 crores. Exports of tea which reached in all time high of Rs 180 crores in 1967-68 witnessed a declining trend up to 1973-74, but it picked up in 1974-75 and reached the level of Rs 569.6 crores in 1977-78. It also declined to Rs 340.4 in 1978-79. Among the other important items which showed marked improvement in 1978-79 over 1977-78 are engineering goods, sugar and leather and leather goods. Table 19.2 gives the principal items of exports for 1950-51, 1965-66, 1970-71 and 1973-74 onwards.

Jute Manufactures

A brief review covering some of the important items is given below : During the past few years, exports of Indian jute goods have been losing ground in the world markets primarily due to keen competition

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

TABLE 19·2

Exports of Principal Commodities (By Sea, Air and Land)

(Rs in lakhs)

	1950-51	1965-66	1970-71	1973-74	1974-75	1975-76	1976-77	1977-78	1978-79
Tea	7,989	11,484	14,825	14,603	22,806	23,691	29,314	56,969	34,045
Coffee	135	1,294	2,511	4,601	5,136	6,665	11,485	19,442	14,406
Tobacco unmanufactured	1,411	1,957	3,140	6,841	8,036	9,313	9,662	11,320	11,072
Jute manufactured incl. twist and yarn	11,277	18,917	18,917	22,573	29,403	25,083	20,083	24,485	16,656
Oilcakes	3	3,464	5,542	17,819	9.596	8,612	22,381	13,327	11,579
Cashew kernels	855	2,740	5,206	7,443	11,816	9,613	1,061	14,954	8,023
Sugar	17	1,119	2,930	4,259	33,933	47,233	14,812	1,947	13,192
Vegetable oils (non-essentials)	2,526	409	703	3,165	3,366	3,526	4,858	2,068	1,358
Leather & leather manfrs	2,577	2,821	7,159	16,657	13,388	20,148	26,349	24,796	32,625
Cotton piecegoods	11,797	5,524	7,529	19,504	15,895	15,874	25,396	22,473	20,005
(*a*) Mill-made	10,717	4,691	6,750	16,266	12,965	11,939	20,079	14,335	13,897
(*b*) Handloom	1,080	833	779	3,238	2,926	3,935	5,317	8,138	6,108
Cotton Apparel	115	636	3,020	6,740	9,692	14,491	25,700	23,505	34,549
Pearls, Precious & semiprecious stones, worked, un-worked	n.a.	2,326	4,188	10,690	9,840	12,294	24,243	54,580	71,059
Chemicals & allied products (excl. essential oils and plastic materials)	n.a.	914	2,936	5,030	9,291	8,445	10,910	11,669	14,628
Silver	—	Negl.	Negl.	564	8,184	18,785	15,143	7,860	9,444
Fish & fish preparations	246	659	3,054	8,924	6,617	12,656	18,025	17,433	22,828
Iron ore and concentrates	22	4,237	11,728	13,287	16,039	21,393	23,849		
Woollen carpets, carpeting floor rugs & materials	556	448	996	2,406	3,365	4,546	4,523	24,084	23,291
Iron & steel	287	1,238	6,720	2,618	2,106	6,801	28,299	18,537	11,507
Engineering goods	N.S.S.	1,980	13,041	20,168	35,657	41,297	55,443	61,739	69,996
TOTAL (including other items)	60,064	80,564	1,53,516	2,52,340	3,32,883	4,04,281	5,14,525	5,40,426	5,72,516

N. S. S.—Not separately specified.
n.a.—Not available.

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

from synthetic substitutes and supplies from Bangladesh. During 1976-77, exports of jute goods declined to Rs 200 crores from Rs 250 crores during the preceding year. However, some lost ground was recovered during 1977-78 when export of this item increased to Rs 244.8 crores. During 1978-79, it again declined to Rs 166.5 crores.

Jute Corporation was set up in 1971 to stabilise prices of jute at remunerative levels and to market jute goods abroad.

Tea

Exports of tea in 1977-78 increased substantially to Rs 569 crores from Rs 293 crores in the preceding year. It declined to Rs 340 crores during 1978-79.

A Tea Trading Corporation was set up in 1971 to promote exports of packaged tea.

Cotton Textiles

Exports of cotton textiles are subject to quantitative restrictions imposed by a number of industrial countries. This has restricted the scope for increase in exports. Unilateral action by European Economic Community to restrict import of cotton textiles has affected our exports seriously. However, dismantling of quota restrictions by USA on handloom garments is an encouraging development in our favour.

During 1978-79, exports of cotton piece-goods (mill-made) stood at Rs 139 crores as compared to Rs 143 crores during 1977-78 and Rs 200 crores during 1976-77.

Export of ready-made cotton garments stood at Rs 345 crores during 1978-79 as compared to Rs 235 crores during 1977-78.

Unmanufactured Tobacco

The increasing trend in the exports of unmanufactured tobacco continued during 1977-78. It showed a slight fall during 1978-79 when it stood at Rs 110 crores as compared to Rs 113 crores during 1977-78.

A Tobacco Board was set up in January 1976 to deal with the problems of production and marketing of flue-cured virginia tobacco.

Fruits and Vegetables

Exports of fruits and vegetables during 1977-78 amounting to Rs 193 crores were higher by Rs 30 crores compared with the preceding year. The main item under this group is cashew kernels, exports of which amounted to Rs 148 crores as compared to Rs 106 crores in the preceding year, registering an increase of Rs 42 crores.

Engineering Goods

Exports of engineering goods increased to Rs 700 crores in 1978-79 as against Rs 617 crores in 1977-78. The range of engineering goods exported not only showed a fair measure of diversification and specialisation but some of the products also found their way to developed countries.

Iron Ore

Exports of iron ore increased substantially in terms of value but marginally in terms of quantity. They amounted to Rs 233 crores in 1978-79 as against Rs 240 crores in 1977-78.

Iron and Steel

Exports of iron and steel during 1978-79 were valued at Rs 115 crores recording a decrease of Rs 70 crores over the preceding year.

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

Fish

Exports of fish at Rs 174 crores in 1977-78 recorded a decline of Rs 6 crores over the previous year. The unit value realised from the exports of fish also registered a decline from Rs 28.33 per kg during 1976-77 to Rs 27.48 per kg in 1977-78. The main reason for decline in exports was the government's policy of restricting export of popular fish varieties which have great domestic demand. However in 1978-79, the exports showed an increase which stood at Rs 228 crores.

Coffee

Exports of coffee in 1977-78 at Rs 194 crores registered an increase of Rs 80 crores over the previous year. The increase was due to a rise in quantity exported and in the unit value realised. India's exports of coffee till recently were regulated in terms of the International Coffee Agreement to which she is a signatory. This restricted the scope for increasing the exports to the traditional market. From 1 October 1973, the operation of the quota and price clauses of the Agreement had been suspended. The world quota system under this Agreement, when introduced, will probably be based on price movements and past export performance. The Coffee Board, therefore, has undertaken a programme to popularise the use of coffee in non-traditional markets to maximise exports. During 1978-79, the exports of coffee declined to Rs 144 crores.

Leather and Leather Manufactures

Exports of leather and leather manufactures (excluding footwear) at Rs 248 crores during 1977-78 recorded a decline of Rs 15 crores over the preceding year. However, it increased to Rs 326 crores during 1978-79.

Oil Cakes

Export of oil cakes at Rs 116 crores during 1978-79 declined from the level of Rs 133 crores in 1977-78.

Handicrafts

Exports of gems, precious and semi-precious stones (unworked and worked) improved from Rs 123 crores in 1975-76 to Rs 242 crores during 1976-77 and further to Rs 546 crores during 1977-78 and Rs 710 crores during 1978-79. This increase was due to favourable market conditions abroad, particularly in the USA. An appreciable increase was also recorded in the exports of handmade carpets and druggets. Moderate increase were recorded in the exports of metal artware, handprinted textiles, shawls, scarves and lohis of all fibres.

IMPORTS

Table 19.3 gives principal imports with value, for the years 1950-51, 1965-66, 1970-71 and 1972-73 onwards.

The rising trend in imports was reversed in 1967-68 and imports thereafter continued to decline till 1969-70. The decline was mainly in imports of foodgrains, because of better domestic crop. In some other imports the decline was due to indigenous substitution, shortage of foreign exchange and slackness in domestic demand. There was, however, a sharp increase in imports during 1974-75 and 1975-76 mainly due to larger imports of food, fuel and fertilizers. But in 1976-77, there was a decline in imports. During the next two years, it showed an increase.

Imports in 1978-79

Imports during 1978-79 increased to Rs 6,788 crores compared to Rs 6,020 crores during the preceding year. The increase in imports was mainly due to larger imports of edible oils, raw cotton, fertilizers, pearls and precious stones and synthetic fibres.

INDIA 1980. Agamnigam Digital Presevation Foundation, Chandigarh

TABLE 19·3

IMPORTS OF PRINCIPAL COMMODITIES (BY SEA, AIR AND LAND)

(Rs in lakhs)

	1950-51	1965-66	1970-71	1972-73	1973-74	1974-75	1975-76	1976-77	1977-78	1978-79
Milk and cream dried or condensed	356	664	704	1,794	1,499	1,825	2,036	3,099	2,551	4,056
Vegetable oils	334	711	2,308	1,550	5,694	1,230	1,419	10,061	71,161	53,709
Oil seeds, nuts & kernels	229	881	636	1,232	737	1,007	785	330	1,335	4,503
Fresh fruits and nuts	951	1,886	3,582	4,068	3,640	4,717	4,202	2,849	4,692	5,132
Wheat, unmilked	9,921	26,473	17,337	4,816	34,610	69,818	1,21,055	80,710	9,358	6,607
Rice	5,349	4,190	2,982	1,071	645	1,217	4,658	4,598	618	102
Raw cotton	10,007	4,621	9,883	9,088	5,205	2,667	2,822	12,946	19,887	2,908
Raw jute	7	916	14	113	1,222	375	333	676	—	—
Iron & Steel	1,431	9,800	14,704	22,581	24,946	41,728	31,190	21,973	26,277	46,947
Raw wool & hair	562	512	1,607	1,188	2,095	2,748	2,592	2,798	2,864	3,021
Machinery (Electric & non-Electric)	9,142	42,160	32,816	43,195	55,662	56,448	77,745	83,174	88,513	95,725
Transport equipment	3,493	7,055	6,655	10,012	9,497	13,122	15,713	14,740	22,525	27,050
Manufactures of metals	1,394	1,817	928	1,879	2,189	2,762	3,314	3,185	3,807	4,620
Copper	849	3,337	6,020	5,190	7,083	7,302	2,184	4,616	5,133	10,378
Zinc	656	1,284	2,197	2,286	2,772	5,536	2,131	3,560	4,200	3,313
Aluminium	238	329	335	287	287	305	995	231	1,135	3,306
Petroleum crude & partly refined	n.a.	3,487	10,590	14,482	41,709	95,490	1,05,280	1,15,162	1,24,620	1,25,116
Chemical elements & compounds	917	3,586	6,798	9,138	10,966	17,882	18,020	13,725	19,655	22,625
Medicinal & pharmaceutical products	997	873	2,427	2,322	2,643	3,406	3,626	4,217	6,358	7,922
Fertilizers manufactured	1,235	3,890	6,120	9,626	16,284	43,620	46,941	19,772	25,812	37,072
Newsprint	537	618	1,873	2,052	1,848	4,499	3,832	4,720	6,086	8,035
Synthetic & regenerated fibre (man-made fibre)	n.a.	n.a.	721	494	254	272	634	3,015	19,177	19,822
TOTAL (including other items)	65,021	1,40,853	1,63,420	1,86,744	2,95,537	4,51,993	5,26,520	5,07,395	6,02,023	6,78,864

n.a.—not available

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

DIRECTION OF TRADE

The principal countries from which India imported and the value of imports from each of these countries for the years 1950-51, 1965-66, 1970-71, 1971-72 and 1973-74 onwards are shown in table 19.4.

Imports

The table shows that over the years USA has been the largest supplier, mainly because of imports of foodgrains and other items under aid and grants. But due to decline in imports of foodgrains by India, the USA was relegated to the second position in 1972-73. But again from 1973-74 it regained its position with Iran occupying the second place. There was also appreciable increase in imports from USSR, Japan, Belgium, West Germany, Italy and Saudi Arabia during the period.

Exports

UK and USA continued to be India's principal buyers until 1968-69. Since 1969-70, USSR and Japan are also among the principal buyers. During 1968-69, the share of UK and USA in India's exports was 14.8 and 17.2 per cent respectively. But in 1976-77 they accounted for 10.2 and 11.0 per cent respectively. However, in 1976-77, USA was the largest buyer with a share of 11.0 per cent in the total exports followed by Japan (10.9 per cent), UK (10.2 per cent) and USSR (8.8 per cent). Other important buyers were France, Germany (West), Italy, Netherlands, Bangladesh, Singapore, Poland, Switzerland, Iraq, Egypt, Indonesia and Iran.

The principal countries to which India exported and the value of exports to each one of these countries for the years 1950-51, 1965-66, 1970-71 and 1972-73 onwards are given in table 19.5. A study of these figures reveals an increasing diversification in the direction of export trade. India's exports to the East European countries rose from Rs 63 crores in 1961-62 to Rs 770 crores in 1976-77.

TRADE POLICY

Efforts were made to re-orient the export strategy with a view to reducing the social costs of exports and to encouraging the exports of those products in which we have long-term comparative advantage and which are dynamic in terms of expansion possibilities. An essential element of export strategy also has been encouraging diversification in terms of products and markets and increasing bargaining power of our exporters.

Import policy has been liberalised in order to meet the essential requirements of the economy, speedily and without unnecessary administrative costs. It also made available any input that is necessary from export production through REP licences. Besides, a number of items have been placed on the OGL in order to encourage industrial production through liberal imports of raw materials, components and capital goods not available from indigenous sources. A detailed review was carried out after the import policy announcement and further necessary modifications and simplifications were announced in the light of that review. It is expected that this will improve the flow of input supplies for the Indian industry and keep the prices of essential consumer items under check.

Export production base of dynamic commodities such as diamonds, gems and jewellery, handicrafts, etc. has been strengthened by creating new infrastructure, e.g., Hindustan Diamond Corporation, Training Institutes, etc. and schemes for replenishment of gold at international prices, in respect of exports of gold jewellery.

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

TABLE 19·4

IMPORTS FROM PRINCIPAL COUNTRIES (BY SEA, AIR AND LAND)

(Rs in lakhs)

Country	1950-51	1965-66	1970-71	1971-72	1973-74	1974-75	1975-76	1976-77	1977-78	1978-79
Australia	3,345	2,418	3,658	13,385	4,381	11,848	10,167	25,360	7,248	9,161
Bangladesh	—	—	—	346	1,704	918	465	607	120	177
Belgium	922	1,151	1,151	5,104	6,571	10,190	8,649	5,750	15,325	35,644
Burma	1,880	972	964	205	7	1	263	55	303	25
Canada	2,190	3,152	11,723	10,761	11,586	13,042	23,201	12,940	18,120	24,013
Czechoslovakia	277	2,115	2,020	1,591	2,671	3,331	5,301	3,413	2,914	3,080
Egypt	3,287	1,995	3,984	2,887	2,590	2,283	1,899	2,115	1,403	1,411
France	1,107	1,805	2,134	3,935	7,029	8,116	19,653	14,110	15,846	22,526
Germany (West)	—	13,714	10,747	17,258	20,579	30,687	36,996	30,700	55,482	62,616
Iran	3,700	3,408	9,164	12,198	26,758	47,266	45,988	50,787	54,349	35,246
Italy	1,626	1,986	2,886	3,594	4,940	7,838	8,483	5,744	8,695	12,109
Japan	1,011	7,933	8,343	17,853	25,953	45,347	36,118	29,705	42,744	56,437
Kenya	1,852	456	969	632	1,743	983	877	700	42,409	48,206
Malaysia[1]	81	1,277	575	842	3,209	1,120	1,458	3,398	22,103	23,968
Netherlards	726	1,977	1,909	3,669	5,656	4,759	6,383	6,570	8,215	15,780
Saudi Arabia	87	866	2,417	4,484	13,135	29,765	29,013	33,198	24,680	19,501
Singapore	1,608	—	117	283	972	722	1,166	879	5,097	8,711
Sudan	749	574	2,094	4,580	2,193	503	364	1,904	5,267	1,735
Sweden	529	1,063	980	1,893	2,393	2,599	6,847	3,575	5,773	7,081
Switzerland	761	1,451	1,157	1,165	1,695	3,652	5,541	904	6,754	7,406
UK	13,531	15,009	12,676	23,725	25,217	21,340	28,400	32,950	46,107	56,625
USA	11,916	53,483	45,295	23,487	49,843	72,909	1,28,522	1,05,930	75,587	75,920
USSR	23	8,317	10,613	11,437	25,473	40,249	30,978	33,200	44,638	46,906
TOTAL (including other countries)	65,021	1,40,853	1,63,420	1,86,744	2,95,537	4,51,993	5,26,520	5,07,379	6,02,023	6,78,864

[1]Figures for 1965-66 relate to Malaysia including Singapore.

TABLE 19·5

EXPORTS TO PRINCIPAL COUNTRIES

(Rs in lakhs)

Country	1950-51	1965-66	1970-71	1972-73	1973-74	1974-75	1975-76	1976-77	1977-78	1978-79
Argentina	1,065	415	334	77	642	1,063	398	229	246	154
Australia	2,971	1,749	3,446	2,598	5,078	6,141	4,821	6,518	8,256	8,801
Bangladesh	—	—	—	16,824	5,878	4,220	6,219	5,457	5,161	5,286
Burma	2,446	357	1,403	436	154	465	928	904	853	1,214
Canada	1,379	2,027	2,796	2,820	3,109	4,418	4,580	4,988	4,601	4,872
Cuba	—	29	16	1	—	—	—	—	—	—
Czechoslovakia	1,008	1,593	2,946	4,610	4,379	6,038	3,471	4,470	3,727	3,721
Egypt	587	2,705	5,647	3,172	1,488	5,255	10,013	9,089	7,168	6,955
France	910	1,103	1,798	4,490	4,970	8,622	8,622	17,703	14,614	17,771
Germany (West)	—	1,797	3,231	6,228	1,679	10,617	11,791	22,977	24,451	—
Indonesia	42	82	410	530	2,678	5,096	5,172	6,058	4,074	8,08
Italy	1,500	939	1,401	4,885	6,935	5,243	8,002	11,900	10,060	13,798
Japan	1,027	5,705	20,348	21,716	35,875	29,665	43,276	54,415	50,583	59,742
Kenya	641	486	787	550	1,028	1,540	1,572	1,994	2,881	3,609
Malaysia[1]	550	1,259	1,173	934	2,463	2,926	3,285	2,990	3,363	4,500
Netherlands	1,016	791	1,398	3,540	7,334	7,175	8,223	19,529	13,713	18,127
New Zealand	367	657	597	825	1,355	2,074	1,290	1,350	1,410	1,278
Nigeria	462	400	862	965	1,149	2,161	3,755	2,499	2,960	2,724
Singapore	3,068	—	1,763	1,784	4,354	3,679	5,305	5,883	6,926	7,972
Sri Lanka	1,968	1,279	3,182	801	984	2,685	2,311	3,935	5,459	8,865
Sudan	418	817	3,827	2,071	1,859	6,646	3,652	5,250	3,558	4,467
UK	13,982	14,478	17,044	17,253	26,314	31,226	42,132	52,069	52,527	53,076
USA	11,588	14,698	20,734	27,574	34,592	37,493	51,998	57,597	67,702	76,904
USSR	138	9,289	20,985	30,482	28,602	42,135	41,669	44,590	65,688	41,059
TOTAL (including other countries)	60,064	80,564	1,53,516	1,97,083	2,52,340	3,32,883	4,04,281	5,14,323	5,40,787	5,72,463

[1] Figures for 1965-66 relate to Malaysia including Singapore.

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

EXPORT PROMOTION

To impart dynamism to the country's efforts to expand and diversify the exports, a series of measures have been put into operation. These cover export assistance and incentives, transport facilities, training in market research, rationalisation of institutional arrangements and technical services including some with the help of UN agencies and friendly countries and establishment of joint ventures abroad. Other facilities provided include release of foreign exchange for specified purposes, import replenishment, priority in allotment of scarce raw materials, in some cases at concessional prices, drawback of import and excise duties and other general and specific reliefs in line with international trade practices.

The government and the Reserve Bank have taken measures from time to time to facilitate credit for exporters at reasonable interest. Exporters can obtain both pre-shipment and post-shipment advances from commercial banks at concessional rate of interest. The Industrial Development Bank of India makes advances to exporters of capital goods and machinery in association with commercial banks.

To help exporters meet the competition in foreign market, develop marketing competence and neutralise the disadvantages inherent in the present stage of the development of the economy, a scheme has been put in force under which cash compensatory support is offered on the exports of selected non-traditional industrial products with substantial export possibilities.

The export promotion measures aim at increasing production and diversifying export products so as to secure maximum benefit for the domestic economy. The government has constituted task forces for many product groups, namely, electronics, leather and leather manufactures, handicrafts, gem and jewellery, furniture and agricultural products. These task forces include representatives of trade and industry, export-related institutions, government agencies and experts. Special task forces have also been set up to encourage exports of the small scale industries.

Organisations

The Government of India has established several specialised organisations for export promotion. The more important of these are briefly described below :

The Central Advisory Council on Trade, constituted on 15 February 1978, advises the government on matters relating to (i) exports and imports policy and programmes, (ii) the operation of import and export control, (iii) organisation and development of commercial services and (iv) organisation and expansion of export production. The Council has been constituted to replace the Board of Trade, which was set up in 1962 and reconstituted in October 1976, and the Advisory Council on Trade, which was constituted in January 1977.

The Trade Development Authority, New Delhi, has been established to induce and organise entrepreneurs, largely in the medium and small scale, to develop their individual export capabilities.

The Federation of Indian Export Organisations, New Delhi, coordinates and supplements the export promotional activities of various organisations and institutions such as Export Promotion Councils, Commodity Boards, Chambers of Commerce, trade associations and other specialised bodies. During 1975-76, the government announced a scheme for providing financial assistance to the consultancy firms registered with the FIEO to explore avenues available abroad for promotional activities in export business.

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

Export Promotion Councils aim at securing the co-operation of consumers, producers and exporters in the country for export promotion. The Councils perform both advisory and executive functions. During 1977-78, 17 such Councils were functioning.

Commodity Boards are statutory bodies and are responsible for production, development and export of certain commodities. At present, five such Boards are in existence dealing with tea, coffee, cardamom, rubber and tobacco (see also chapter 'Industry').

Besides Export Promotion Councils and Commodity Boards, there are recognised Export Houses which specialise in export trade. The export house scheme was revised during 1976-77. According to the present scheme, export house certificates are issued to those exporters who fulfil the minimum prescribed requirements in terms of their export performance during the last three years. They are also required to fulfil prescribed requirements such a managerial capacity, adequate finances, etc. Recognition certificates are issued by the office of the Chief Controller of Imports and Exports after close scrutiny of the performance of each applicant. Recognised export houses are entitled to government assistance from the Marketing Development Fund for a wide range of their activities in addition to the benefits under the Registered Exporters' Policy.

The Indian Institute of Packaging, Bombay, established in 1966, undertakes research on raw materials for the packaging industry. It organises training programmes on packaging technology and consultancy services for the industry. It has two regional offices, one in Madras and the other in Calcutta.

The Indian Institute of Foreign Trade, New Delhi, an autonomous organisation under the Societies Registration Act, is primarily concerned with developing training programmes, research and market studies.

The *Export Inspection Council,* Calcutta, is a statutory body set up under the Export (Quality Control and Inspection) Act, 1963 to adopt measures for the introduction and enforcement of quality control and compulsory pre-shipment inspection of various exportable commodities. Quality control of textile goods and machinery is conducted by the *Textiles Committee,* Bombay, set up under the Textiles Committee Act, 1963.

The *Indian Council of Arbitration,* New Delhi, was set up in 1965 to promote arbitration for settling commercial disputes and to popularise arbitration among traders, particularly those engaged in international trade.

A statutory board called the *Marine Products Export Development Authority* was set up in 1972 at Cochin for the development of the marine products industry with special reference to exports.

An *Export Processing Zone* has been set up at Santa Cruz, Bombay, to promote the export of electronic equipments and components. It is entirely an export-oriented project and the units admitted to it will be obliged to export cent per cent of their production.

The *Handicrafts and Handlooms Export Corporation,* a subsidiary of the State Trading Corporation, and the Indian Motion Pictures Export Corporation are engaged in promoting exports in their respective fields.

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

TRADE FAIR AUTHORITY OF INDIA

With a view to giving a new orientation to the country's trade promotion through fairs and exhibitions, an autonomous organisation, namely, Trade Fair Authority of India has been set up as a government company under Section 25 of the Companies Act of 1956. It takes over the functions of the erstwhile Directorate of Exhibitions and Commercial Publicity, the Trade Fair Organisation and the Indian Council of Trade Fairs and Exhibitions. The Authority started functioning from 1 March 1977. It undertakes publicity for Indian goods by participating in international trade fairs and exclusive Indian exhibitions abroad. It also organises national fairs and exhibitions in India.

TRADE AGREEMENTS

To forge close commercial relations, India has entered into trade agreements with a number of countries. From time to time, trade and economic delegations are also exchanged with other countries with a view to increasing and diversifying the flow of trade both in pattern and direction.

Long-term trade agreements with USSR and German Democratic Republic were signed on 15 April 1976 and 7 March 1977 respectively.

Annual trade protocols for 1978 were concluded with all the six East European countries with whom India had bilateral balanced trade during 1977-78.

New trade agreements were concluded with Hungary and Poland. The partner countries agreed to continue providing most-favoured nation treatment to each other. The agreements also seek to enlarge the commodity coverage and India's exports of traditional items. The significant feature of the agreement with Hungary relates to the provision for moving over from bilateral balanced trade in non-convertible rupees to multilateral trade with payments in free foreign exchange. The new Trade and Payments Agreement with Poland is effective from 1 January 1978 to 31 December 1980.

The Tripartite Agreement among India, Yugoslavia and Egypt was extended for a further period of five years with effect from 1 April 1978.

A new trade agreement between India and Afghanistan was signed on 24 June 1978. According to this agreement, all payments and exchanges in economic trade between the two countries would be effected in freely convertible and transferable currencies through normal banking channels.

Indo-Nepal Treaties of Trade, of Transit and Agreement for Co-operation to Control Unauthorised Trade were signed on 17 March 1978. These Treaties have replaced Indo-Nepal Treaties of Trade and Transit, 1971.

PUBLIC SECTOR AGENCIES

For increasing State participation in the country's export and import trade, a number of public sector agencies have been set up. A brief description of some of the important agencies is given below :

State Trading Corporation

The State Trading Corporation of India Ltd. (STC) was registered in 1956 under the Indian Companies Act. Its main objective is to enlarge the scope of India's exports and to arrange for essential imports. Its activities are directed towards the diversification of exports, expansion of existing markets and development of new markets for traditional and non-traditional products. It also often undertakes price support and buffer stock operations in certain commodities. The Corporation works in close co-operation with the government, the trade and industry.

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

The STC group now includes STC, Cashew Corporation of India, Handicrafts and Handloom Exports Corporations, Projects and Equipment Corporation, State Chemicals and Pharmaceuticals Corporation and Central Cottage Industries Export Corporation. From a small beginning in 1956-57, when the turnover of STC group was Rs 9.2 crores, there has been a rapid growth in turnover to Rs 1,183 crores (provisional) in 1976-77.

During 1976-77, the total exports of the STC were of the order of Rs 666 crores, imports Rs 301 crores and domestic trade worth Rs 8 crores. During 1977-78, the exports of the STC amounted to Rs 557 crores.

STC exports a wide range of products such as sugar, rice, coffee, tobacco, castor oil, leatherware, bulk commodities such as cement and salt, textiles and manufactured products. As a policy to make available mass consumption items in the domestic markets, export of few items like rice, vegetables, etc. were restricted. Due to unfavourable international prices, export of sugar was not undertaken.

Though originally set up as an agency to handle trade with Eastern Europe, STC is now handling trade with other areas also. Its export trade in 1976-77 comprised 18 per cent with Eastern Europe, 38 per cent with Western Europe and 21 per cent with the countries covered by the Economic and Social Commission for Asia and the Pacific (ESCAP).

STC promotes exports of the products of small and medium scale industries through assistance in finance, quality control, raw materials and marketing.

The Corporation arranges imports of raw materials required for the country's economic and industrial development. Such imports include edible oil, raw wool, synthetic yarn, newsprint and many other items.

STC maintains a network of offices at Beirut, Belgrade, Budapest, Buenos Aires, Colombo, Dacca, East Berlin, Frankfurt, Hongkong, Kuwait, London, Moscow, Nairobi, New York, Paris, Singapore, Sydney, Jeddah, Milan, Tokyo, Baghdad and Dar-es-Salam.

Projects and Equipment Corporation

The Projects and Equipment Corporation of India Ltd. was formed in 1971 as a subsidiary of the STC consisting of the Engineering and Railway Equipment Divisions of STC.

The main objectives of the Corporation are to boost the export of engineering, industrial and railway equipment, to penetrate new markets and to foster export ventures and turn-key projects.

During 1977-78, the turnover of the Corporation was Rs 38 crores comprising Rs 33 crores of exports and Rs 5 crores of imports.

Cashew Corporation of India

Set up in 1970 as a subsidiary of the STC, the Cashew Corporation of India ensures steady supplies of imported raw cashewnuts at fair prices to the export-oriented cashew processing industry. During 1977-78, the turnover of the Corporation was Rs 26 crores. The Corporation has two offices, one in Paris and the other in New York, which carry out export publicity for Indian products.

Handicrafts and Handlooms Export Corporation

The Handicrafts and Handlooms Export Corporation, a subsidiary of STC, promotes the export of Indian handloom and handicraft products and ready-to-wear garments, besides the canalised export of woollen knit-wear. During 1977-78, exports of the Corporation amounted to Rs 58 crores as compared to Rs 45 crores in 1976-77.

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

Minerals and Metals Trading Corporation

The Minerals and Metals Trading Corporation (MMTC), set up in 1963, is the premier international trading house in the public sector for expanding the exports of mineral ores from the country. The total trade turnover of the Corporation during 1977-78 was estimated to be about Rs 939 crores, exports amounting to Rs 202.1 crores and imports Rs 731.6 crores.

Mica Trading Corporation

The Mica Trading Corporation of India Ltd., Patna, was incorporated in 1973 as a subsidiary of the MMTC to handle the mica trade exclusively. An important objective of the Corporation, which started functioning from June 1974, is to advise the small exporters on free participation in export trade which had hitherto been dominated and monopolised by a few big mine owners and exporters. Exports of MITCO were of the order of Rs 19.18 crores during 1977-78.

State Chemical and Pharmaceuticals Corporation of India

The State Chemical and Pharmaceuticals Corporation of India Ltd. was incorporated as a subsidiary of STC on 1 January 1976. It has been set up to provide specialised service to the industry. It will take over the trade in chemicals and drugs, hitherto handled by STC. Its turnover during 1977-78 was Rs 122 crores as compared to Rs 98 crores during 1976-77.

Central Cottage Industries Corporation of India

The Central Cottage Industries Corporation of India Ltd. was incorporated as a subsidiary of HHEC on 4 February 1976. It took over the central cottage industries emporium on 1 April 1976. The Corporation was expected to achieve a turnover of Rs 4.8 crores during 1977-78.

INTERNAL TRADE

The internal trade of India is many times larger than its external trade, owing to the vastness of the country, its varied climate and diverse natural resources.

The internal trade can be classified under five broad heads. These are : (i) rail-borne trade, (ii) river-borne trade, (iii) coasting trade, (iv) trade borne on other craft, and (v) trade by air. Complete and precise data about internal trade are not available because reliable statistics pertaining to items (iv) and (v) are not available.

Rail-and-River Borne Trade

Statistics of rail-and-river borne trade are based on the invoices of the railways and steamer companies. Till March 1965, they were recorded on 'import' basis but since then they are being recorded on 'export' basis. For the purpose of these statistics, India is divided into a number of trade blocks, roughly representing the states of the Indian union. The chief port towns of Bombay, Calcutta, Cochin and Madras are constituted as separate trade blocks. Similarly, the less important ports are grouped as 'other ports', each of which is treated as separate trade block.

[1]Up to March 1962, India was divided into 29 trade blocks. The number increased to 31 in April 1962, consequent on the bifurcation of Bombay State and further to 32 in April 1964 after the formation of the State of Nagaland. The number went up to 34 in April 1967 after Haryana was formed and Chandigarh became a centrally-administered territory. The Kandla port was introduced as a new trade block in April 1975. Thus there are, now, 35 blocks.

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

Table 19.6 shows the movement of selected articles by rail and river between different trade blocks[1] for selected years between 1960-61 and 1976-77. The internal trade of each block is not included in these figures.

TABLE 19.6
RAIL-AND-RIVER BORNE TRADE

('000 quintals)

Commodity	1960-61	1965-66	1974-75	1975-76	1976-77
Coal and coke	3,14,796	3,31,919	3,38,574	3,90,533	4,05,367
Raw cotton	3,982	3,143	3,541	3,340	3,344
Cotton piece goods	2,643	2,563	786	715	550
Rice (not in husk)	22,283	16,898	20,707	25,937	33,501
Wheat	30,642	45,959	50,774	68,983	65,808
Raw jute	4,015	4,615	3,675	4,534	3,734
Iron and steel products	37,025	73,432	85,328	90,760	89,820
Oilseeds	9,509	7,796	7,429	8,639	8,550
Salt	13,539	20,860	27,151	28,572	27,359
Sugar (excluding Khandsari sugar)	9,106	10,492	12,999	16,939	14,051

Note : The above statistics relate to quantities only as value figures are not recorded in the railway and steamer companies, invoices. Besides, the trade carried by only one steam company between three trade blocks was recorded from April 1960 to August 1965. The company suspended its river service from September 1965. Inland trade data for 1972-73 cover river borne trade carried by the Inland Water Transport Corporation Limited. Further, non-trade freight movements are also included because of the difficulty of isolating them.

Coasting Trade

Coasting trade is recorded under two broad heads—(i) internal trade, *i.e.*, trade amongst the ports within the same maritime block, and (ii) external trade, i.e., trade between one maritime block on the one hand and all other maritime blocks on the other. Table 19.7 shows the value of coast-wise trade of India in selected years since 1960-61.

TABLE 19.7
COAST-WISE TRADE

(Rs lakhs)

	1960-61	1970-71	1972-73	1974-75	1975-76	1976-77
Imports						
Indian merchandise	17,105	11,299	12,124	15,966	10,262	11,631
Foreign merchandise	361	—	—	—	—	—
Treasure	—	—	—	—	—	—
Total Imports	17,466	11,299	12,124	15,966	10,262	11,631
Exports						
Indian merchandise[1]	17,683	11,299	12,124	15,966	10,262	11,631
Foreign merchandise[1]	442	—	—	—	—	—
Treasure	—	—	—	—	—	—
Total Exports	18,125	1,299	12,124	15,966	10,262	11,631
Total Trade	35,591	22,598	24,248	31,932	20,524	23,262

[1]The distinction between Indian and foreign merchandise was abolished from April 1964.

CC-0. Agamnigam Digital Preservation Foundation, Chandigarh

RAILWAYS

The Indian railway system is the largest in Asia and the fourth largest in the world. It is also the biggest public undertaking in the country. The railways, during 1977-78, had a route length of 60,693 km. They ran daily about 11,000 trains, covering a distance of about 13 lakh km, operated 7,100 stations, carried over 90 lakh passengers and about 6.55 lakh tonnes of freight. The operational fleet consisted of 11,100 locomotives, 37,000 coaching vehicles and 4,00,000 wagons. They employed 14.95 lakh regular employees and about 2.3 lakh casual labourers. The total investment was Rs 5,896 crores and the revenue Rs 2,133 crores.

Progress under the Plans

As a result of planned development since 1951, both the passenger and goods traffic have more than doubled. The passenger vehicles and wagons have practically doubled but the number of locomotives has increased by 35.75 per cent.

There has also been a progressive increase in expenditure on the development of railways under the Five Year Plans. It was Rs 423.23 crores, Rs 1,043.69 crores, Rs 1,685.8 crores, Rs 1,419.76 crores and Rs 1,523.2 crores (provisional) in the First, Second, Third, Fourth and Fifth Plans respectively.

Tables 20.1 and 20.2 show the progress of the government railways for selected years since 1950-51.

TABLE 20.1
PROGRESS OF GOVERNMENT RAILWAYS

Year	Route length (kilometres)			Running track (km)	Passengers originating (lakh)	Goods originating (lakh tonnes)
	Electrified	Non-electrified	Total			
1950-51	388	53,208	53,596	59,315	12,840	930
1960-61	748	55,499	56,247	63,602	15,940	1,562
1965-66	2,423	55,976	58,399	68,375	20,820	2,030
1970-71	3,706	56,084	59,790	71,669	24,311	1,965
1971-72	3,953	56,115	60,067	73,225	25,358	1,978
1972-73	4,055	56,094	60,149	73,664	26,530	2,013
1973-74	4,191	56,043	60,234	74,104	26,437	1,849
1974-75	4,397	55,904	60,301	74,197	24,290	1,966
1975-76	4,649	—	60,216	74,255	29,452	2,233
1976-77	4,719	55,947	60,666	74,839	33,003	2,391
1977-78	4,720	55,973	60,693	75,012	35,037	—

Modernisation of Railways

Tables 20.1 and 20.2 also show the trend towards modernisation of railways. The electrified route length has increased more than 12 times since 1950-51. Steam locomotives, production of which was discontinued from 1972, are being gradually replaced by electric and diesel locomotives. Since the beginning of the five year plans, the number of diesel locomotives has gone up by more than 100 times, from a mere 17 in 1951 to 1903 in 1976-77 and of electric locomotives by more than twelve times, i.e., from 72 to 844. By 31 March 1977, diesel engines were operating over 30,279 route kilometres. Diesel and electric locomotives together carried 82.0 per cent of the total goods traffic in terms of gross tonne km in 1976-77 (10 per cent

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

INDIA
RAILWAYS

KILOMETRES
200 0 200 400

Jammu Tawi, Pathankot, Amritsar, Jullundur, Nangal Dam, Firozpur, Ludhiana, Simla, CHANDIGARH, Kalka, Saharanpur, Dehra Dun, Hardwar, Ambala, Bhatinda, Sri Ganganagar, Suratgarh, Kathgodam, Meerut, Moradabad, Sadulpur, DELHI, Hapur, Churu, Kolyat, Bikaner, Bareilly, Shahjahanpur, Rewari, Sikar, Aligarh, Farrukhabad, Sitapur, Jaisalmer, Mathura, Bandikui, Pokaran, Merta Rd, Agra, JAIPUR, LUCKNOW, Gonda, Faizabad, Gorakhpur, Raxaul, Jodhpur, Ajmer, Dholpur, Gwalior, Kanpur, Shahganj, Muzaffarpur, Samastipur, Sawai Madhopur, Sheopur, Jhansi, Allahabad, PATNA, Barauni, Katihar, Kota, Banda, Mughalsarai, Varanasi, Bhagalpur, Malda, Abu Road, Chittaurgarh, Manikpur, Barharwa, Udaipur, Chopan, Gaya, Bhuj, GANDHINAGAR, Mehsana, Binc, Katni, Garwa Rd, Dhanbad, Asansol, Ratlam, Nagda, Vidisha, Damoh, Barkakana, Durgapur, Okha, Viramgam, Ahmedabad, Ujjain, BHOPAL, Anuppur, Kumda, Ranchi, Burdwan, Dwarka, Rajkot, Godhra, Indore, Itarsi, Jabalpur, Tatanagar, CALCUTTA "Haora", Vadodara, Nainpur, Mandla Fort, Porbandar, Raurkela, Bilaspur, Kharagpur, Junagadh, Khandwa, Amla, Gondia, Jharsuguda, Rupsa, Haldia, Veraval, Bhavnagar, Surat, Jalgaon, Bhusaval, Durg, Raipur, Nagpur, Chalisgaon, Cuttack, Akola, Wardha, Manmad, Nasik Rd, Aurangabad, Chand, Titlagarh, BHUBANESHWAR, Kurda Rd, Adilabad, Berhampur, Puri, BOMBAY, Kalyan, Mudkhed, Dhond, Ramagundam, Kirandul, Pune, Kazipet, Warangal, Satara, Solapur, Visakhapatnam, Gulbarga, HYDERABAD, Rajahmundry, Miraj, Wadi, Kakinada, Kolhapur, Vijyawada, Raichur, Kurnool, Guntur, Londa, Belgaum, Marmagao, Gadag, Ongole, Hubli, Nellore, Dharmavaram, Gudur, Renigunta, Birur, Arsikere, Arkonam, MADRAS, Mangalore, Hassan, Katpadi, BANGALORE, Chingleput, Mysore, Villupuram, Cannanore, Salem, Pondicherry, Calicut, Ootacamund, Erode, Coimbatore, Tiruchirapalli, Dindigul, Thanjavur, Ernakulam, Madurai, Tenkasi, Quilon, Rameswaram, TRIVANDRUM, Tirunelveli, Kanyakumari

Darjiling, New Jalpaiguri, Shiliguri, Tezpur, Murkongselek, Dibrugarh, Tinsukia, Jogighopa, Gauhati, Dimapur, Silchar, Dharmanagar

ARABIAN SEA, BAY OF BENGAL, INDIAN OCEAN, LAKSHADWEEP SEA, LAKSHADWEEP (INDIA), ANDAMAN SEA, ANDAMAN AND NICOBAR ISLANDS (INDIA)

Railway Lines
BROAD GUAGE
METRE GUAGE
NARROW GUAGE

KBK

© Government of India copyright, 1980.

Based upon Survey of India map with the permission of the Surveyor General of India.
The territorial waters of India extend into the sea to a distance of twelve nautical miles measured from the appropriate base line.

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

in 1960-61), although, in terms of numbers, these were only 25 per cent of all locomotives on line. Modernisation and improvement of signalling and telecommunications have also made much headway. In 1976-77, the multi-channel microwave link was in operation on 10,881 km.

TABLE 20.2
ROLLING-STOCK

Year	Number of locomotives				Number of coaching vehicles[1]	Number of wagons
	Steam	Diesel	Electric	Total		
1950-51 . .	8,120	17	72	8,209	18,628	2,05,596
1960-61 . .	10,312	181	131	10,624	28,439	3,07,907
1965-66 . .	10,613	727	403	11,743	32,892	3,70,019
1970-71 . .	9,387	1,169	602	11,158	35,145	3,83,990
1971-72 . .	9,222	1,288	639	11,149	35,561	3,82,725
1972-73 . .	8,963	1,431	668	11,062	35,936	3,84,283
1973-74 . .	8,847	1,610	669	11,126	36,422	3,88,366
1974-75 . .	8,682	1,702	729	11,113	36,566	3,90,968
1975-76 . .	8,496	1,803	796	11,095	36,818	3,95,250
1976-77 . .	8,263	1,903	844	11,010	36,794	3,97,773
1977-78 . .	8,215	2,025	901	11,141	37,220	3,99,971

[1]Includes electric multiple units.

Improvement in the standards of track for higher speeds on trunk routes and important mainlines is being brought about with the help of track recording cars, which are now being produced by the railways themselves. The improvement in the standard of track has enabled Delhi-Howrah and New Delhi-Bombay Rajdhani Express trains to run at speeds of 130 and 120 km per hour respectively. Some other mail and express trains are also running at 100 to 110 km an hour. On the metre gauge also the maximum permissible speed has been raised from 75 km to 100 km per hour. So far, more than 16,000 km of track on trunk routes and main lines have been brought up to the standards for operation of speeds above 100 km an hour.

Manufacture of Rolling-stock

The Ministry of Railways has set up three units for the production of locomotives and coaches. They are the Locomotive Works at Chittaranjan, the Diesel Locomotive Works at Varanasi and the Integral Coach Factory at Perambur.

The Chittaranjan unit began production in 1950 and had delivered 2,351 steam locomotives up to the end of December 1972 when their production was discontinued. Since 1961, it has been producing electric locomotives. Up to 31 March 1978, it had produced 538 AC and 78 DC and 36 AC/DC broad gauge electric locos. In addition, it also produced 310 diesel shunting locomotives and 30 ZDM-3/ ZDM-4 narrow gauge diesel locos. The indigenous content is about 88 per cent in the case of electric locomotives and about 81 per cent for diesel shunters.

The Diesel Locomotive Works, Varanasi, set up in 1964, started with assembling diesel locos from imported components. The first loco from this unit was commissioned in the same year. Up to the end of March 1978, it had turned out 853 BG and 186 MG locomotives, in addition to 5 OBO diesel shunters and 21 WDS-5 diesel electric shunters and 31 WDS-6 prototype shunters. The indigenous content of BG locos is 90.5 per cent and that of MG locos 90.6 per cent.

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

The Integral Coach Factory, Perambur, went into production in 1955. Originally designed to produce broad gauge coach shells, it has diversified its production to turn out furnished coaches, both broad and metre gauge, electric multiple units, diesel rail cars and air-conditioned coaches. Up to 31 March 1978 it had produced 12,459 passenger coaches (unfurnished shells) and the furnishing unit, which was added in 1957-58, had equipped 10,476 coaches. In addition, the Bharat Earth Movers Ltd., Bangalore, a public sector undertaking, produced 182 broad gauge coaches and Jessop and Co. Ltd., Calcutta, turned out 68 metre gauge coaches including 16 EMU coaches in 1977-78.

Wagon requirements of the railways are largely met by the industry, which includes units both in the public sector and the private sector and to some extent by the railway repair workshops. There are 9 units with an annual installed capacity of 22,761 wagons (in terms of four wheelers) in the private sector and three railway workshops with a capacity of approximately 24,000 units annually. The production of wagons in 1977-78 was 12,166.5 four-wheeler units.

Passenger Traffic and Amenities

The passenger traffic was over 35 crores in 1977-78 as against 12.8 crores in 1950-51. The earnings from the II class passengers were Rs 557 crores in 1977-78 as compared to Rs 84.47 crores in 1950-51.

The average rate charged per passenger for every kilometre was 2.50 paise (ordinary) and 4.48 paise (mail/express) for II class passengers, 10.9 paise for I class and 32.3 paise for air conditioned class passengers. The rates for II class passengers were among the lowest in Asia.

Since passengers travelling by II class form the bulk of the railway users and are also the main source of income, more and more amenities have been provided for them. Fifty-six Janta trains are run exclusively for them. Two-tier and three-tier sleeper coaches have been introduced for their convenience on all mail and express trains. All-steel and light-weight integral type coaches have been provided for safe and comfortable travel.

The task of providing basic amenities, such as, proper booking arrangements, waiting halls and drinking water supply at all stations was completed in 1970-71. Catering arrangements are available at 2,991 stations and 67 pairs of trains. Ready-to-serve food is supplied in several trains and the sale of cheap food packets was in force at 204 important stations.

Goods Traffic

The railways carried over 22.33 crore tonnes of goods in 1976-77 as compared to 9.3 crore tonnes in 1950-51. The freight revenue was Rs 1,275.56 crores in 1976-77. The principal commodities carried by railways are shown in table 20.3.

To speed up movement of freight, many fast goods trains have been introduced on important routes. The first daily super parcel express between Delhi and Calcutta, covering the distance in 34 hours, was introduced in 1973.

To provide door-to-door service, a container serivce is also operated. The containers are carried on guaranteed schedules by fast goods trains. The service, at present, covers Bombay-Ahmedabad, Bombay-New Delhi, Madras-Bangalore, Calcutta-New Delhi, Bombay-Madras, Bombay-Secunderabad, Bombay-Bangalore, Calcutta-

 CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

TABLE 20.3
PRINCIPAL COMMODITIES CARRIED BY RAILWAYS

('000 tonnes)

Commodity	1950-51	1960-61	1965-66	1975-76	1976-77	1977-78
Coal . .	30,911	50,396	66,741	80,518	82,340	83,850
Cement .	2,471	6,548	8,649	11,597	13,700	13,600
Iron and steel .	2,750	7,588	10,077	10,758	12,695	11,427
Metallic ores (other than manganese ore)	3,055	11,140	18,623	26,933	28,299	27,842
Manganese ore	881	1,230	1,497	1,331	1,340	1,228
Foodgrains .	12,659	7,805	14,514	16,184	19,961	19,444
Raw jute	470	644	763	632	587	530
Tea . .	265	250	203	116	118	104
Paper and paper products .	193	442	670	899	986	1,000
Jute manufactures	271	263	275	548	419	338
Raw cotton .	525	536	485	382	348	287
Cotton textiles	477	380	308	123	103	92
Oilseeds . .	1,595	1,517	1,470	1,168	1,153	899
Sugarcane .	2,819	3,237	2,717	1,491	1,395	1,391
Sugar . .	933	1,488	1,543	2,038	1,781	1,520
Salt . .	1,576	1,981	2,569	2,904	2,971	2,889
Chemical manures	589	1,394	2,452	7,169	7,776	8,211
Mineral oil .	2,692	4,700	7,495	11,663	12,395	13,062

Bombay, Calcutta-Madras, Bombay-Kota and New Delhi-Madras-Bangalore routes. A new super express goods service was introduced between Howrah and Gauhati from May 1976.

Administration

The responsibility for the administration and management of government railways vests in the Railway Board under the overall supervision of a Cabinet minister. The Board consists of a chairman, who is *ex-officio* Principal Secretary to the Union Ministry of Railways, a Financial Commissioner and three other members, who are all *ex-officio* Secretaries to Government of India in the Ministry of Railways.

Railway Zones

The railways are divided into nine zones, each headed by a General Manager, who is responsible to the Railway Board for operation, maintenance and financial matters.

The nine zones, with their headquarters and the route kilometres in brackets, are : Central (Bombay-VT, 6,679), Eastern (Calcutta 4,197), Northern (New Delhi, 10,781), North-Eastern (Gorakhpur, 5,104), North-East Frontier (Maligaon-Gauhati, 3,628), Southern (Madras, 6,489), South-Central (Secunderabad, 6,479), South-Eastern (Calcutta, 6,999), and Western (Bombay-Churchgate, 10,337).

Co-operation between the public and the railway administration is secured through various committees including (i) National Railway Users' Consultative Council, (ii) Zonal Railways Users' Consultative Committees, and (iii) Divisional Railway Users' Consultative Committees.

Railway Finances

Since 1924-25, railway finances remain separated from general revenues. They have their own funds and accounts and the railway budget is presented separately to Parliament. However, the Railways contribute to the general revenues a fixed rate of dividend on the capital invested. The quantum of contribution, which at present includes the dividend, payment in lieu of the merger of passenger tax with passenger fares and contribution to the Railways Safety Works Fund, is re-

CC-0. Agamnigam Digital Presevation Foundation,Chandigarh

The Integral Coach Factory, Perambur, went into production in 1955. Originally designed to produce broad gauge coach shells, it has diversified its production to turn out furnished coaches, both broad and metre gauge, electric multiple units, diesel rail cars and air-conditioned coaches. Up to 31 March 1978 it had produced 12,459 passenger coaches (unfurnished shells) and the furnishing unit, which was added in 1957-58, had equipped 10,476 coaches. In addition, the Bharat Earth Movers Ltd., Bangalore, a public sector undertaking, produced 182 broad gauge coaches and Jessop and Co. Ltd., Calcutta, turned out 68 metre gauge coaches including 16 EMU coaches in 1977-78.

Wagon requirements of the railways are largely met by the industry, which includes units both in the public sector and the private sector and to some extent by the railway repair workshops. There are 9 units with an annual installed capacity of 22,761 wagons (in terms of four wheelers) in the private sector and three railway workshops with a capacity of approximately 24,000 units annually. The production of wagons in 1977-78 was 12,166.5 four-wheeler units.

Passenger Traffic and Amenities

The passenger traffic was over 35 crores in 1977-78 as against 12.8 crores in 1950-51. The earnings from the II class passengers were Rs 557 crores in 1977-78 as compared to Rs 84.47 crores in 1950-51.

The average rate charged per passenger for every kilometre was 2.50 paise (ordinary) and 4.48 paise (mail/express) for II class passengers, 10.9 paise for I class and 32.3 paise for air conditioned class passengers. The rates for II class passengers were among the lowest in Asia.

Since passengers travelling by II class form the bulk of the railway users and are also the main source of income, more and more amenities have been provided for them. Fifty-six Janta trains are run exclusively for them. Two-tier and three-tier sleeper coaches have been introduced for their convenience on all mail and express trains. All-steel and light-weight integral type coaches have been provided for safe and comfortable travel.

The task of providing basic amenities, such as, proper booking arrangements, waiting halls and drinking water supply at all stations was completed in 1970-71. Catering arrangements are available at 2,991 stations and 67 pairs of trains. Ready-to-serve food is supplied in several trains and the sale of cheap food packets was in force at 204 important stations.

Goods Traffic

The railways carried over 22.33 crore tonnes of goods in 1976-77 as compared to 9.3 crore tonnes in 1950-51. The freight revenue was Rs 1,275.56 crores in 1976-77. The principal commodities carried by railways are shown in table 20.3.

To speed up movement of freight, many fast goods trains have been introduced on important routes. The first daily super parcel express between Delhi and Calcutta, covering the distance in 34 hours, was introduced in 1973.

To provide door-to-door service, a container serivce is also operated. The containers are carried on guaranteed schedules by fast goods trains. The service, at present, covers Bombay-Ahmedabad, Bombay-New Delhi, Madras-Bangalore, Calcutta-New Delhi, Bombay-Madras, Bombay-Secunderabad, Bombay-Bangalore, Calcutta-

CC-0. Panini Kanya Maha Vidyalaya Collection. Digitized by eGangotri Digital Presevation Foundation, Chandigarh

TABLE 20.3
PRINCIPAL COMMODITIES CARRIED BY RAILWAYS

('000 tonnes)

Commodity	1950-51	1960-61	1965-66	1975-76	1976-77	1977-78
Coal . .	30,911	50,396	66,741	80,518	82,340	83,850
Cement .	2,471	6,548	8,649	11,597	13,700	13,600
Iron and steel .	2,750	7,588	10,077	10,758	12,695	11,427
Metallic ores (other than manganese ore)	3,055	11,140	18,623	26,933	28,299	27,842
Manganese ore	881	1,230	1,497	1,331	1,340	1,228
Foodgrains .	12,659	7,805	14,514	16,184	19,961	19,444
Raw jute	470	644	763	632	587	530
Tea . .	265	250	203	116	118	104
Paper and paper products .	193	442	670	899	986	1,000
Jute manufactures	271	263	275	548	419	338
Raw cotton .	525	536	485	382	348	287
Cotton textiles	477	380	308	123	103	92
Oilseeds . .	1,595	1,517	1,470	1,168	1,153	899
Sugarcane .	2,819	3,237	2,717	1,491	1,395	1,391
Sugar . .	933	1,488	1,543	2,038	1,781	1,520
Salt . .	1,576	1,981	2,569	2,904	2,971	2,889
Chemical manures	589	1,394	2,452	7,169	7,776	8,211
Mineral oil .	2,692	4,700	7,495	11,663	12,395	13,062

Bombay, Calcutta-Madras, Bombay-Kota and New Delhi-Madras-Bangalore routes. A new super express goods service was introduced between Howrah and Gauhati from May 1976.

Administration

The responsibility for the administration and management of government railways vests in the Railway Board under the overall supervision of a Cabinet minister. The Board consists of a chairman, who is *ex-officio* Principal Secretary to the Union Ministry of Railways, a Financial Commissioner and three other members, who are all *ex-officio* Secretaries to Government of India in the Ministry of Railways.

Railway Zones

The railways are divided into nine zones, each headed by a General Manager, who is responsible to the Railway Board for operation, maintenance and financial matters.

The nine zones, with their headquarters and the route kilometres in brackets, are : Central (Bombay-VT, 6,679), Eastern (Calcutta 4,197), Northern (New Delhi, 10,781), North-Eastern (Gorakhpur, 5,104), North-East Frontier (Maligaon-Gauhati, 3,628), Southern (Madras, 6,489), South-Central (Secunderabad, 6,479), South-Eastern (Calcutta, 6,999), and Western (Bombay-Churchgate, 10,337).

Co-operation between the public and the railway administration is secured through various committees including (i) National Railway Users' Consultative Council, (ii) Zonal Railways Users' Consultative Committees, and (iii) Divisional Railway Users' Consultative Committees.

Railway Finances

Since 1924-25, railway finances remain separated from general revenues. They have their own funds and accounts and the railway budget is presented separately to Parliament. However, the Railways contribute to the general revenues a fixed rate of dividend on the capital invested. The quantum of contribution, which at present includes the dividend, payment in lieu of the merger of passenger tax with passenger fares and contribution to the Railways Safety Works Fund, is re-

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

viewed periodically by a Parliamentary Convention Committee. So far, six such committees have been appointed.

Table 20.4 gives an outline of government railway finances for selected years since 1955-56.

TABLE 20.4
GOVERNMENT RAILWAY FINANCES

(Rs crores)

Item	1955-56	1965-66	1975-76	1976-77[2]	1977-78[2]	1978-79
Passenger earnings						672·77
Upper class	12·85	27·64	53·04	569·29[3]	57·63	66·71
Lower class	94·86	191·53	461·09		549·37	606·06
Other coaching earnings	20·87	39·40	89·42	86·88	91·31	91·47
Goods earnings	180·28	465·49	1,150·27	1,325·91	1,382·94	1,305·41
Other sundry earnings	6·81	22·25	50·04	53·29	53·99	69·15
Total earnings	315·67	746·31	1,803·86	2,035·37	2,135·24	2,138·80
Suspense	+0·62	—12·74	36·85	+0·74	—25·00	+12·24
Gross traffic receipts	316·29	733·57	1,767·01	2,036·11	2,110·24	2,151·04
Ordinary working expenses	212·95	485·85	1,470·17	1,548·96	1,648·74	1,673·17
Appropriation to depreciation reserve fund	45·00	85·00	115·00	135·00	140·00	145·00
Appropriation to pension fund	—	12·00	24·25	34·40	39·35	49·20
Payment to worked lines	0·27	0·19	0·20	0·21	0·21	0·18
Total working expenses	258·22	583·04	1,609·62	1,718·57	1,828·30	1,867·55
Net miscellaneous expenditure	7·73	15·69	20·36	21·27	24·12	22·67
Net railway revenues	50·34	134·03	137·84	296·27	257·82	260·82
Payment to General Revenues	36·12[1]	116·28	198·14	208·94	225·32	224·16
Net surplus(+) or deficit(—)	+14·22	+18·56	—61·11	+87·33	+32·50	+36·66
Operating ratio (per cent)	81·6	97·5	91·1	84·4	86·6	87·5
Capital-at-charge	968·98	2,680·32	4,354·78	4,556·17	4,900·58	5,023·92[4]

[1]Dividend only.
[2]Provisional
[3]Consolidated for Upper and Lower Classes.
[4]Excludes capital-at-charge of Metropolitan Transport projects (Rs 57.45 crores).

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

Staff Welfare

Several schemes are in operation for the welfare of the railway employees who numbered 14.7 lakhs in 1976-77 as against 9.1 lakhs in 1950-51. Among the important amenities are the provision of housing and medical facilities, holiday homes at hill stations and schools and hostels. Between 1951 and 1977 (31 March), about 2,26,000 residential units, 99 hospitals and 564 health centres were maintained for the staff. The number of holiday homes at hill stations and other places was 24.

Research and Training

The Research, Design and Standards Organisation (RDSO) was set up in 1957 for achieving self-sufficiency in the designing and manufacture of railway equipment. The RDSO was formed by the merger of the Central Standards Office and the Railway Testing and Research Centre. It has its headquarters at Lucknow with branches at Lonavala and Chittaranjan.

Over the years, the RDSO has helped the Railways in indigenisation in all fields of railway operations and has also made it possible for them to export a number of items of railway equipment. It has recently produced an all-aluminium overhead equipment for railway electrification, which is the first such equipment made entirely from aluminium in the world. In the field of locomotion, RDSO has successfully evolved a design to repower pack the imported metre gauge YDM—1 class locomotives and give them a new lease of life, by utilising 700 HP diesel engines produced at Chittaranjan Locomotive Works.

The railways have four major training institutions. They are : (i) Railway Staff College, Vadodara, (ii) Indian Railways Institute of Advanced Track Technology, Pune, (iii) Indian Railways Institute of Signal Engineering and Telecommunications, Secunderabad, and (iv) Indian Railways Institute of Mechanical and Electrical Engineering, Jamalpur. These institutions also train officials from foreign countries.

ROADS

The Indian road network is one of tne largest in the world. In 1975-76, the road length was 13.67 lakh km as against 4 lakh km in 1950-51. The road development programme envisaged under the 1978—83 draft Plan lays emphasis on a co-ordinated and balanced development of road network in the country under (i) primary roads comprising national highways; (ii) secondary and feeder road system covering the state highways and major district roads; and (iii) rural roads including village roads and other district roads. Substantial outlays are proposed for road development in the rural and the tribal areas.

Plan Expenditure

In the first three Plans and the three Annual Plans, a sum of Rs 1,134.86 crores was spent on road development. The Fourth Plan and Fifth Plan expenditure was Rs 826.94 crores and Rs 1,348 crores, respectively. The proposed outlay for road development as envisaged under the draft 1978—83 Plan for central and state sectors is Rs 2,600 crores.

Table 20.5 shows the progress of road construction for selected years since 1951.

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

In terms of area and population, the total road length in the country in 1975-76 worked out to about 41.8 km for every 100 sq km

TABLE 20.5 PROGRESS OF ROAD CONSTRUCTION

('000 kilometre)

Type of Road	1950-51	1960-61	1971-72	1972-73	1973-74	1974-75	1975-76
Surfaced . .	157	263	421	447	475	493	538
Unsurfaced . .	243	261	598	627	661	721	829
Total . . .	400	524	1,019	1,074	1,136	1,214	1,367

of area and 251 km for every one lakh of population. The surfaced road length was 16.46 km for every 100 sq km of area and 198.72 km for every one lakh of population.

National Highways

The central government is directly responsible for the national highways system. In 1947, approximately 2,500 km of roads, called missing road links, and thousands of culverts and bridges, which did not exist, were required to be constructed to have an integrated and continuous network. There was an increase in the missing road links owing to the addition of new roads to the national highways system in latter years. Up to 31 March 1979, missing road links including diversions constructed totalled 4,193 km and the number of major bridges constructed was 329. The present national highways system includes roads of a total length of 29,016 km. An outlay of Rs 456 crores has been provided in the draft Sixth Five Year Plan for the development of national highways.

State Sector Roads

State highways and district and rural roads are the responsibility of state governments. The length of surfaced roads, excluding national highways, maintained by various agencies in the states and union territories increased by about 3,81,000 km between 1951 and 1976. Roads will be developed in rural areas under the Minimum Needs Programme, the objective being to link all villages with a population of 1,500 and above with all-weather roads during the Sixth Plan period. In coastal, hilly or tribal areas, where the population is sparse, all-weather roads will be provided to clusters of villages with a viable population.

The central government assists in the development of certain selected roads in the states.

The road length in the states and union territories in 1975-76 is given in Table 20.6.

Border Roads

The Border Roads Development Board was set up in 1960 to accelerate the economic development of the north and north-eastern border areas by making them accessible through the development of arterial routes. The Board's programme includes the construction of about 7,961 kms of new roads, improvement of about 7,488 kms of the existing roads and surfacing of about 12,154 kms of roads. Of this, about 7,960 kms of new roads have been constructed, 5,165 kms of existing roads improved and 9,567 kms of the roads surfaced as in November 1978.

The Border Roads Organisation has constructed the world's highest road from Manali in Himachal Pradesh to Leh in Kashmir. The

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

average altitude of the terrain is 4,270 metres and the road negotiates four passes at heights ranging from 4,875 to 5,458 metres. The Organisation is now constructing another road which will, on completion, become the world's highest road negotiating heights up to 5,639 metres. The Organisation is also capable of executing civil works pertaining to hydel and irrigation projects, air fields and buildings, etc.

In addition to its own activities, the Organisation has been assisting other ministries/government departments in the execution of their projects. Recently in response to a request made by the Ministry of Steel, BRO constructed a critical stretch of 18 kms of road for the Kudremukh Iron Ore Company Limited and completed its construction within a record period of 4½ months. It is also providing technical expertise and personnel to certain public sector undertakings for their works abroad.

TABLE 20.6
LENGTH OF ROADS IN INDIA (1975-76)

(Kilometres)

State/Union Territory	Surfaced Roads	Unsurfaced Roads	Total
Andhra Pradesh	53,906	50,476	1,04,382
Assam	7,236	46,791	54,027
Bihar	21,525	71,686	92,211
Gujarat	29,208	19,438	48,646
Haryana	15,823	9,955	25,778
Himachal Pradesh	3,142	14,681	17,823
Jammu and Kashmir	6,285	7,991	14,276
Karnataka	56,671	43,935	1,00,606
Kerala	19,109	68,330	87,439
Madhya Pradesh	44,185	49,502	93,687
Maharashtra	53,722	59,380	1,13,102
Manipur	1,521	7,288	8,809
Meghalaya	850	2,845	3,695
Nagaland	1,586	4,922	6,508
Orissa	13,824	34,445	48,269
Punjab	27,967	12,193	40,160
Rajasthan	26,844	29,183	56,027
Sikkim	75	2,264	2,339
Tamil Nadu	61,225	48,934	1,10,159
Tripura	1,294	4,609	5,903
Uttar Pradesh	52,668	1,19,671	1,72,339
West Bengal	30,768	1,07,733	1,38,501
Andaman and Nicobar Islands	620	54	674
Arunachal Pradesh	2,571	7,871	10,442
Chandigarh	69	2	71
Dadra & Nagar Haveli	164	66	230
Delhi	1,448	147	1,595
Goa, Daman & Diu	3,166	2,842	6,008
Mizoram	28	879	907
Pondicherry	775	979	1,754
Total	5,38,275	8,29,092	13,67,367

Road Research

The Central Road Research Institute, New Delhi, was set up in 1952 for conducting research on road engineering under the administrative control of the Council of Scientific and Industrial Research. Since 1 April 1978, it is under the administrative control of the Ministry of Shipping and Transport. Grants to the institute are given to enable it to carry on research programme relating to various problems of roads. For the promotion and coordination of road research at the national level, a Highway Research Board was set up in 1973 under the auspices of the Indian Roads Congress. The Roads Wing of the Union

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

Ministry of Shipping and Transport, among other things, prepares standards, specifications and type designs for the different aspects of roads and bridges, and promotes application of new techniques in the construction of roads and bridges. It has also launched a programme of road research on problems of immediate national importance.

Road Transport *Motor Vehicles*

The total number of motor vehicles on roads as on 31 March 1978 was 32.45 lakhs, more than fourteen times that of 1947. These included 14.02 lakh motor cycles, 7.72 lakh private cars and jeeps, 1.02 lakh public service vehicles including taxis and 3.71 lakh goods vehicles. Among the states, Maharashtra has the maximum number of vehicles followed by Uttar Pradesh and Gujarat. The state-wise break up of motor vehicles is given in table 20.8.

Nationalisation of Road Transport

Barring Goa, Daman and Diu and Pondicherry, most of the states and union territories have nationalised passenger transport in varying degrees. In the country as a whole, 52.4 per cent buses were being run by the public sector undertakings as on 31 March 1978. Statutory Corporations have been set up under the Road Transport Corporations Act, 1950 in several states. In other states, the nationalised services are operated by departmental or municipal corporations or registered companies. In most of the big cities, bus services are state-owned. Goods transport continues to be almost exclusively in the private sector.

National Permits Scheme

For removal of constraints on the movement of goods by road transport, a scheme of national permits for public carriers was introduced in 1975. Under the scheme, the central government has specified the number of national permits each state or union territory can issue. The maximum number of permits to be issued initially was fixed at 5,300 which has been increased to 8,300. So far, about 7,400 national transport permits have been issued.

North Free Zone for Public Carrier Scheme

In addition to the National Permit Scheme, the 'North Free Zone for Public Carriers Scheme' was introduced with effect from 1 October 1978 with a view to further facilitating movement of goods by road. The states participating in the scheme are Jammu and Kashmir, Punjab, Haryana and Delhi. According to the scheme, each of these states can issue any number of public carrier permits for operation in the reciprocating states subject to their counter-signatures. A permit holder will have to pay the motor vehicle tax and goods tax of the home state and the counter-signature fee of the reciprocating states. A permit holder under the scheme can move freely without restriction of the routes in the home state but while operating in the area of the other participating states, he is not allowed to pick up or set down goods between any two points lying wholly within the jurisdiction of the reciprocating state(s).

Passenger Vehicile

Passenger vehicles fleet in the public sector, during the last 10 years, has increased to over 61,661 in 1978 from 28,000 in 1967. Lately, there has been persistent demand for more and more services particularly in metropolitan cities. About 2.7 crore commuters are carried every day by the state transport undertakings which employ about 4 lakh persons.

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

Transport Bodies

To ensure co-ordination between the central and state policies and operation of the different modes of transport, the Government of India has set up a Transport Development Council. The Inter-State Transport Commission is responsible for the development, coordination and regulation of road transport services on inter-state routes. As a result of the efforts made by the Commission, almost all the states and union territories now have reciprocal arrangements for operation of goods and passenger services on inter-state routes. They have introduced zonal permit schemes for the unhindered movement of a limited number of public goods carriers over the national and state highways on payment of tax at a single point. Thus, the National Permit Scheme and the North Free Zone for Public Carrier Scheme will further facilitate free flow of goods by road over long distances.

An Association of State Road Transport Undertakings, set up in 1963, co-ordinates the activities of 46 state undertakings and helps secure procedural uniformity, higher standards of service and economic operation.

The estimated share of roadways and railways with regard to total goods traffic in the country is shown in table 20.7.

TABLE 20.7
RAIL-ROAD GOODS TRAFFIC RATIO

(billion tonnes km)

Year	Railways	Road Transport	Percentage share	
			Railways	Road Transport
1960-61	88	17	83·8	16·2
1965-66	117	34	77·5	22·5
1968-69	125	40	75·8	24·2
1973-74	122	65	65·2	34·8
1974-75	134	80	62·6	37·4
1975-76	148	81	64·6	35·4

Revenue

During 1975-76, different motor vehicles together yielded revenue of Rs 1,412.71 crores as against Rs 1,325.94 crores in 1974-75. Of this, the Centre's share was Rs 950.50 crores and that of states Rs 462.21 crores. Maharashtra got the maximum revenue from road and goods taxes followed by Tamil Nadu and Uttar Pradesh. The sources of revenue of the Centre were : import duty on motor vehicles and accessories (Rs 54.75 crores), excise duty on motor vehicles and accessories (Rs 82.28 crores), excise duty on tyres and tubes (Rs 134.49 crores), import duty on tyres and tubes (Rs 1.44 crores), import duty on motor fuel (Rs 29.89 crores), excise duty on motor fuel (Rs 647.65 crores). States revenue consisted of motor vehicles taxes and fees (Rs 209.76 crores), sales tax on motor fuel (Rs 91.95 crores) and passenger and goods taxes (Rs 160.50 crores).

INLAND WATERWAYS

India has about 5,200 km of major rivers, which are navigable by mechanised craft, but only 1,700 km are actually utilised. As regards canals, the available length is 4,300 km but only a length of 485 km is suitable for mechanised craft, of which only 331 km are being actually utilised.

TABLE 20·8

DIFFERENT TYPES OF MOTOR VEHICLES ON ROAD (As on 31 March 1978)

State/Union Territory	All vehicles	Two wheelers	Three wheelers		Cars	Jeeps	Taxis	Buses	Trucks	Tractors	Trailers	Others
			Passenger	Goods								
1	2	3	4	5	6	7	8	9	10	11	12	13
1977-78[1]	32,45,636	14,02,235	89,982	24,192	6,69,022	1,02,746	76,269	1,17,780	3,68,762	2,64,320	92,897	37,431
STATES												
1. Andhra Pradesh (As on 30-9-77)	1,85,609	94,595	6,123	292	25,346	6,054	2,738	7,859	24,564	9,048	4,884	4,106
2. Assam (As on 31-12-77)	6,538	10,717	654	(a)	21,635	(b)	1,405	2,665	13,253	4,629	4,485	6,195
3. Bihar	1,41,493	57,213	2,461	(a)	24,383	9,893	3,284	6,728	21,184	9,109	5,801	1,487
4. Gujarat	2,65,312	2,49,146	18,824	3,612	32,364	5,508	1,277	7,958	19,261	16,880	10,125	357
5. Haryana (As on 31-3-77)	62,019	24,096	1,074	541	5,295	1,782	155	2,268	9,922	15,955	848	83
6. Himachal Pradesh (As on 31-3-77)	18,503	5,568	—	—	2,053	2,169	101	1,961	4,951	1,020	—	620
7. Jammu & Kashmir	22,662	9,211	356	4	3,212	1,909	1,136	1,946	4,075	754	45	14
8. Karnataka	2,48,052	1,23,223	13,415	581	42,521	8,271	2,568	10,183	23,502	9,134	8,104	6,550
9. Kerala	1,18,965	30,032	4,616	401	33,870	6,616	12,794	8,328	17,498	3,207	1,750	5,079
10. Madhya Pradesh (As on 31-12-74)	1,11,016	49,987	3,128	(a)	17,615	3,490	—	4,484	17,461	8,022	1,750	5,079
11. Meharashtra (As on 31-12-77)	5,54,519	2,03,835	14,996	13,707	1,72,997	15,670	23,298	14,290	69,648	12,035	11,641	2,400
12. Manipur	8,062	2,134	132	—	807	1,838	2	808	1,964	164	174	39
13. Meghalaya	...	...	...	...	...	...	...	...	...	...	...	...
14. Nagaland	4,237	802	103	—	519	1,372	55	308	1,008	23	52	—
15. Orissa (As on 31-12-76)	48,479	22,530	516	218	6,269	5,141	621	1,566	9,011	1,171	809	627
16. Punjab	2,40,700	96,712	2,171	2,126	20,231	3,268	1,441	4,300	12,143	74,415	22,754	1,039

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh
INDIA 1980

1	2	3	4	5	6	7	8	9	10	11	12	13
17. Rajasthan	1,24,471	62,024	1,797	—	9,003	11,046	328	4,834	12,579	14,691	7,070	1,099
18. Sikkim	Motor Vehicles Act not yet extended											
19. Tamil Nadu	2,36,114	1,09, 08	4,952	1,056	60,270	(b)	6,443	10,604	25,466	8,534	6,953	328
20. Tripura	7,010	1,205	104	—	1,738	487	340	389	2,134	46	492	75
21. Uttar Pradesh (As on 31-12-77)	3,19,949	1,56,564	2,064	1,085	37,838	8,995	2,297	12,804	25,393	65,204	5,504	2,201
22. West Bengal (As on 31-3-76)	2,04,180	44,813	811	446	81,393	7,797	10,231	8,521	37,105	9,060	812	3,191
23. A & N Islands	1,929	926	2	—	111	197	47	67	414	75	26	64
24. Arunachal Pradesh (As on 31-12-74)	359	68	—	—	18	91	2	13	145	—	—	22
25. Chandigarh (As on 31-12-75)	23,679	16,365	1,075	118	4,500	150	120	107	676	569	—	—
26. D & N Haveli (As on 31-12-77)	516	274	—	—	125	20	—	—	45	33	17	2
27. Delhi (As on 31-6-78)[2]	1,95,965	1,13,064	10,395	(c)	56,484	(b)	2,964	3,934	9,124	(c)	(c)	(c)
28. Goa, Daman and Diu	22,733	10,771	168(a)	—	5,478	283	533	622	4,648	214	16	—
29. Lakshadweep	—	—	—	—	—	—	—	—	—	—	—	—
30. Mizoram (As on 30-6-75)	2,003	68	—	—	124	910	—	27	652	(d)	(d)	222
31. Pondicherry (As on 31-3-77)	8,756	4,954	36	3	2,166	72	113	149	525	319	290	129

1 Provisional
2 Tax paying vehicles only.
(a) Included in passenger three wheelers.
(b) Included in cars.
(c) Included in trucks.
(d) Included in others.
(—) Nil or negligible
(...) Not available.

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

CC-0. Jagamnigam Digital Presevation Foundation, Chandigarh

Important among the navigable rivers are the Ganga and Brahmaputra and their tributaries; the Godavari, Krishna, Mahanadi, Narmada and Tapti and their canals; the backwaters and the canals of Kerala, the Buckingham canal in Andhra Pradesh and Tamil Nadu and the Cumbarjua canal connecting Mandovi and Suvari rivers in Goa.

Inland-water transport is a state subject. The development schemes are mostly taken up by the states as centrally sponsored schemes.

The Fourth Plan expenditure on inland waterways was about Rs 11 crores as against the outlay of Rs 12 crores. A provision of Rs 24.92 crores for central and state sectors was made in the Fifth Plan for the development of inland waterways. The actual expenditure for the four years of the Plan (1974-78) has been Rs 9.87 crores.

For the Sixth Plan (1978-83), a provision of Rs 26 crores has been kept for central and centrally sponsored schemes. An expenditure of Rs 2.07 crores was incurred in the Annual Plan 1978-79 and an expenditure of Rs 3.86 crores is likely to be incurred during 1979-80. For the Annual Plan 1980-81, a provision of Rs 10 crores has been made for central and centrally sponsored schemes.

Inland Water Transport Bodies

The Central Inland Water Transport Board, New Delhi, formulates policy for the development of inland water transport in the country. The Inland Water Transport Directorate of the Union Ministry of Shipping and Transport gives technical advice to the states, which are responsible for the development of inland waterways.

The states of Andhra Pradesh, Assam, Karnataka, Kerala, Madhya Pradesh, Orissa, Tamil Nadu, Uttar Pradesh and West Bengal and the union territory of Goa, Daman and Diu have set up inland water transport organisations to formulate and implement schemes.

CIWTC

The Central Inland Water Transport Corporation, set up in 1967 at Calcutta, operates the river services carrying goods between Calcutta and Assam *via* Bangladesh and also between India and Bangladesh. Its other activities include ship-building and ship-repairing; stevedoring and clearing agency at Calcutta and dredging on the Bhagirathi river.

SHIPPING

India has the largest merchant shipping fleet among the developing countries, and ranks fifteenth in the world in shipping tonnage.

As compared to 1.92 lakh GRT at the time of independence, the country's operative tonnage on 31 March 1979 was 55.75 lakh GRT. Public sector undertakings of the central government own 30.32 lakh GRT, *i.e.*, 54.4 per cent of the total GRT.

Shipping Bodies

The National Shipping Board, which was reconstituted with effect from 25 July 1977, advises the government on shipping matters. The Technical Review Committee in the Union Ministry of Shipping and Transport advises on the steps to be taken to ensure proper coordination of shipping arrangements for government owned/controlled cargoes and to utilize Indian tonnage to the maximum extent possible. The All India Shipping Council is concerned with negotiation on freight and shipping problems with shipping companies and conferences. The Indian National Shipowners' Association promotes the interests of national shipping, ship-building and other allied industries.

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

Shipping Companies

There are 61 shipping companies in the country of which 17 are engaged exclusively in the coastal trade, 27 in overseas trade and the rest of 17 both in coastal and overseas trade. Both the central government shipping companies, *viz.*, Shipping Corporation of India (SCI) and the Mogul Line Limited carry on both the coastal and overseas trade.

The SCI, which is one of the biggest shipping lines of the world, has a merchant fleet of 143 vessels with 28.31 lakh GRT and operates on almost all the important maritime routes. During 1978-79, the SCI had freight earnings of Rs 291.25 crores. The tonnage of SCI accounts for more than 50 per cent of the total Indian tonnage.

The Mogul Line Limited mainly carries Haj pilgrims from Bombay to Jeddah (Saudi Arabia) and back. It also operates two passenger vessels on the Konkan coast. Its fleet consists of 16 vessels with a total GRT of 1.92 lakhs.

The major private sector shipping companies which own one lakh or more GRT are the Scindia Steam Navigation Company Limited (5.81 lakh GRT), Great Eastern Shipping Company Limited (3.92 lakh GRT), India Steamship Company Limited (2.42 lakh GRT), South India Shipping Corporation Limited (1.51 lakh GRT), Damoder Bulk Carriers Limited (1.38 lakh GRT), Chowgule Steamships Ltd. (1.83 lakh GRT) and Dempo Steamships Ltd. (1.22 lakh GRT).

The cargo carried by Indian ships in the country's overseas trade was 2.28 crore tonnes in 1977-78 amounting to over 38 per cent of the country's trade. Almost all the coastal trade is carried by national vessels. With the progressive normalisation with Pakistan and China, trade with these countries has been resumed and our ships have started calling at their ports. India has taken a formal decision to ratify the UN Code of Conduct for Liner Conferences which was signed by India in June 1975.

Training Institutions

There are six training establishments for merchant navy officers and ratings. T. S. Rajendra at Bombay imparts pre-sea training to navigation cadets. The Lal Bahadur Shastri Nautical and Engineering College, Bombay, conducts post-sea instructional courses in navigation and engineering. The Directorate of Marine Engineering Training at Bombay and Calcutta imparts training to marine engineering cadets. 'Bhadra' at Calcutta, 'Mekhela' at Visakhapatnam and 'Navlakshi at Navlakhi provide pre-sea training for deck and engineering ratings and Bhandaris.

Indian Register of Shipping

India established its own register of shipping to survey, classify and register its ships. The register has made steady progress. As against 144 ships duly classed with IRS as on 31 December 1977 aggregating 25.7 lakh GRT, 188 ships have been duly classed as on 31 December 1978 aggregating 26.3 lakh GRT. It also undertakes industrial services in the field of inspection and certification of land based plant and equipment in accordance with the purchasers' certification. It has also been authorised to issue cargo ships with safety construction certificates.

Ship-building

India has three major ship-building yards, *viz.*, Hindustan Shipyard at Visakhapatnam, Garden Reach Ship Builders and Engineers at Calcutta and Mazagon Dock at Bombay. A fourth major shipyard is

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

under construction at Cochin. All these shipyards are in the public sector.

There are at present 11 repair dry docks—5 at Bombay, 5 at Calcutta and one at Visakhapatnam. One more is planned to be constructed at Cochin. Although most of these dry docks can accommodate ships of only less than 10,000 DWT, one dock at Bombay can take ships up to 20,000 DWT and one at Hindustan Shipyard at Visakhapatnam, bulk carriers up to 40,000 DWT. During 1978-79, foreign exchange outgo for ship repairs on the Indian ships in foreign ports was Rs 19.73 crores.

Hindustan Shipyard

The Hindustan Shipyard has built 78 ships since 1947. Its present annual production capacity is 2.65 ships of 21,500 DWT each year. The annual production will rise to three ships of 21,500 DWT each on completion of a development programme now under implementation. Apart from a dry dock, which is in operation since 1971, the West Basin Project has been partially commissioned for ship repair work.

Garden Reach Workshop

The Garden Reach Ship Builders and Engineers build tugs, barges, dredgers and coasters. They have now a capacity to build ocean-going merchant ships of 15,000—26,000 DWT every year. They had a record production of Rs 40.84 crores during 1976-77.

Mazagon Dock

The Mazagon Dock which primarily constructs ships for the Navy, is also capable of building cargo ships, passenger ships, cargo-*cum*-passenger ships, and dredgers. Its subsidiary, the Goa Shipyard Limited, builds launches and tugs and also undertakes ship repairing.

Cochin Shipyard

This shipyard set up with the Japanese collaboration is designed to have a dock for building ships up to 85,000 DWT and a repair dock to accommodate ships up to one lakh DWT. The production has already commenced and the first vessel of 75,000 DWT for the Shipping Corporation of India is expected to be delivered in 1980-81.

PORTS

Indian ports comprise 10 major ports and 160 minor ports scattered all along the coast line of about 6,000 kms. Major ports are the direct constitutional responsibility of the central government in the Ministry of Shipping and Transport while minor ports figure in the concurrent list in the Constitution and are managed by the respective state governments.

Major Ports

The major ports on the west coast of India are Kandla, Bombay, Mormugao, New Mangalore and Cochin while those on the east coast are New Tuticorin, Madras, Visakhapatnam, Paradip, Calcutta and Haldia. Among the major ports, Bombay is the biggest. It is a natural harbour. It handles more than one fourth of the total traffic at the ports, bulk of which consists of petroleum products and dry cargo. Mormugao port enjoys the second position in total traffic tonnage, bulk of which is iron ore. Cochin is a natural harbour. Kandla is a tidal port having a free trade zone. Both these ports largely handle petroleum products. Facilities are being developed at New Mangalore port for the export of Kudremukh iron ore to Iran. Calcutta is a riverine port handling diversified commodities. A new mechanised dock system at Haldia with provision for deep draft vessels down stream of Calcutta supplements the facilities already available at

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

Calcutta port. Haldia dock system is in operation since February 1977. It has a fully equipped containerised berth. Paradip port mainly handles iron ore and general cargo. Visakhapatnam is the deepest land locked and protected port where an outer harbour has been developed for exporting mainly iron ore to Japan. Madras is a man-made port and caters to traffic in iron ore and petroleum products. The first stage of the Tuticorin port has been substantially completed. Works on the construction of a coal jetty and oil jetty are progressing.

The traffic handled by the major ports during 1973-74 to 1978-79 was as follows :

(in '000 tonnes)

	1973-74	1974-75	1975-76	1976-77	1977-78	1978-79
Overseas. .	55,669	57,038	57,489	60,262	55,116	60,886
Coastal . .	7,995	8,702	7,426	7,483	10,134	9,373

The expenditure incurred on the development of major ports upto the end of Fifth Plan period, *i.e.,* 1978 (the plan being terminated one year in advance) was Rs 957.03 crores. For the plan period 1978-79, an allocation of Rs 390 crores has been made for the development of major ports. The expenditure incurred on the development of major ports during the Sixth Plan period, *i.e.,* 1978-79 and 1979-80, is Rs 58.60 crores and Rs 50 crores (anticipated) respectively. For the year 1980-81, an outlay of Rs 99 crores is proposed.

Minor and Intermediate Ports

Even though the management of the minor ports vests in the state government, legislation relating to and coordination of the development of minor ports is the responsibility of the central government. The central government gives loans and provides technical advice to state governments.

Allocations for the development of minor ports are now made in the respective maritime States' plans. However, the development of ports in Andaman and Nicobar Islands and Lakshadweep is the direct responsibility of the central government and a sum of Rs 20 crores has been set aside for this purpose in the 1978—83 plan.

National Harbour Board

The National Harbour Board was set up in 1950 to advise the central and state governments on the management and development of ports, particularly minor ports. It consists of representatives of the maritime states, the central ministries, concerned port authorities and non-official members representing Parliament, shipping, trade, industry and harbour.

Dredging Corporation of India

With the development of expertise, the Government of India set up a central dredging corporation to undertake capital and maintenance dredging at the ports, in addition to the ports' arrangements, as also development of port and port management in other countries. The Corporation got in 1977 a contract for the management of a port in Saudi Arabia. It earned a profit of Rs 4.85 crores in 1978-79.

Navigational Aids

The central government looks after the general navigational aids while the states, port trusts and other agencies are responsible for the local aids. However, under the Indian Lighthouse Act, 1927, the central government exercises general control over all aids through the Depart-

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

ment of Lighthouses and Lightships. The Department maintains various navigational aids along the coast of India besides launches and VHF wireless sets. There are, among others, 136 lighthouses, 20 light-buoys, 13 fog signals, nine radio beacons, twelve decca navigator chain stations, one light vessel, two radars and four racons. In the Sixth Five Year Plan, Rs 16 crores have been provided both for spill over and new schemes.

CIVIL AVIATION

On 31 December 1979, there were 674 aircraft with current certificates of registration and 233 with current certificates of air-worthiness. During 1978, Indian aircraft flew, on scheduled services, 7.98 crore kilometres, carried 60.36 lakhs of passengers and 104,636 tonnes of cargo and mail as against 7.96 crore kilometres, 51.43 lakh passengers and 89,277 tonnes of cargo and mail respectively in 1977.

Directorate of Civil Aviation

The Directorate General of Civil Aviation operates the civil airports in India except the international airports. It is also responsible for the air navigation services which include air traffic control and services for safety and regularity of aircraft operations.

IAAI

The International Airports Authority of India (IAAI) was set up in 1972 for the operation, management, planning and development of the four international airports. The Authority also develops and provides consultancy services in relation to planning and development of airports in India and abroad. It has in hand several such foreign projects.

Airports

There are four international airports and 85 other aerodromes in the country. The international airports are : Bombay (Santa Cruz), Calcutta (Dum Dum), Delhi (Palam) and Madras (Meenambakkam). The aerodromes maintained by the Civil Aviation department as on 31 December 1977 are :

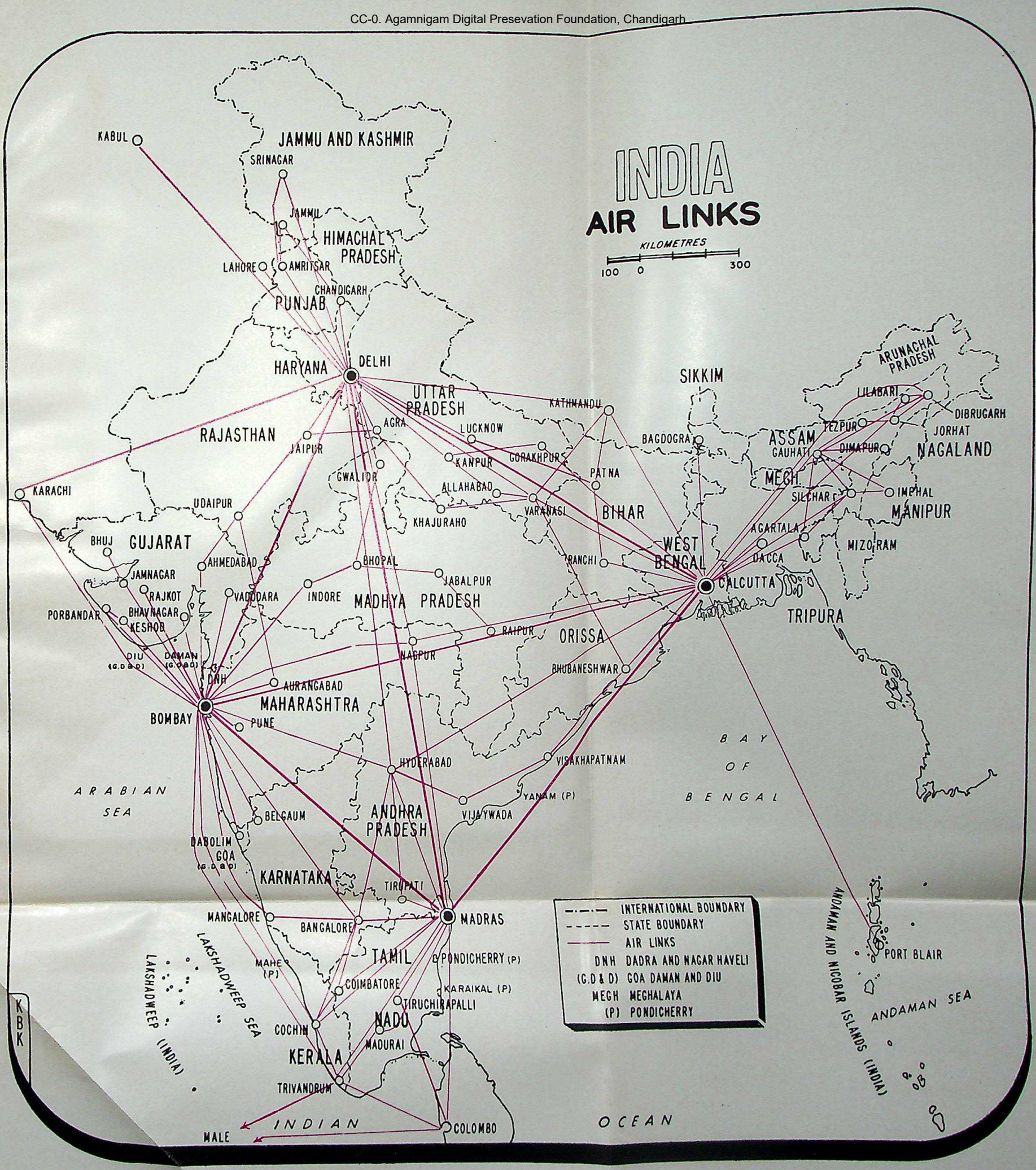
Major Aerodromes : Agartala, Ahmedabad, Amritsar, Begumpet, Delhi (Safdarjung), Gauhati, Jaipur, Lucknow, Nagpur, Patna, Tiruchirappalli and Varanasi (Banaras).

Intermediate Aerodromes : Aurangabad, Behala, Belgaum, Bhavnagar, Bhuntar (Kulu), Bhopal, Bhubaneswar, Bhuj, Bombay (Juhu), Coimbatore, Gaya, Indore, Junagadh (Keshod), Kailashahar, Kamalpur, Kandla, Khajuraho, Khowai, Kota, Kumbhirgram, Madurai, Mangalore (Bajpe), Mohanbari, Muzaffarpur (Rewaghat), Nadirgul (Gliderdrome, Hyderabad), North Lakhimpur (Lilabari), Panagarh, Pantnagar (Phoolbagh), Porbandar, Port Blair, Raipur, Rajkot, Ranchi, Tirupati, Trivandrum, Tulihal (Imphal), Udaipur, Vadodara, Vijayawada and Visakhapatnam.

Minor Aerodromes : Akola, Balurghat, Barapani (Shillong), Bilaspur, Chakulia, Cooch Behar, Cuddapah, Donakonda, Hadapsar (Gliderdrome, Pune), Hassan, Jabalpur, Jhansi, Jharasuguda, Jogbani, Kanpur (Civil), Khandwa, Kolhapur, Lalitpur, Malda, Mysore, Palanpur (Deesa), Panna, Passighat, Rajahmundry, Ramnad, Raxaul, Rupsi, Satna, Shella, Sholapur, Thanjavur, Vellore and Warangal.

In addition there are many aerodromes controlled/owned/maintained by Ministry of Defence, state governments, public undertakings and private individuals and bodies.

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh



© Government of India copyright, 1980.

Based upon Survey of India map with the permission of the Surveyor General of India.

The territorial waters of India extend into the sea to a distance of twelve nautical miles measured from the appropriate base line.

The boundary of Meghalaya shown on this map is as interpreted from the North-Eastern Areas (Reorganisation) Act, 1971, but has yet to be verified.

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

© Government of India copyright, 1980.

Based upon Survey of India map with the permission of the Surveyor General of India.

The territorial waters of India extend into the sea to a distance of twelve nautical miles measured from the appropriate base line.

The boundary of Meghalaya shown on this map is as interpreted from the North-Eastern Areas (Reorganisation) Act, 1971, but has yet to be verified.

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

Air Services

The scheduled air services are run by two public sector corporations, Indian Airlines and Air-India, both of which were formed in 1953. The Indian Airlines provides air services within the country, linking up most of the principal industrial and tourist centres, and also neighbouring countries, *i.e.*, Bangladesh, Nepal, Afghanistan, Pakistan, Maldives and Sri Lanka. During 1978, it carried 49,92,298 passengers and covered over 37.33 crore revenue tonne kilometres. Its operational fleet at present consists of 6 Airbus A-33, 13 Boeing-737, 8 Fokker Friendship and 15 HS-748.

Air-India provides services to/through 34 countries. During 1978, it carried 10,44,152 passengers and flew about 73.78 crore tonne kilometres. Its fleet consists of 9 Boeing-707 and 8 Boeing-747 (Jumbo Jets).

Air Transport Agreements

India has air transport agreements with Afghanistan, Australia, Bangladesh, Belgium, Burma, Czechoslovakia, Egypt, Ethiopia, Federal Republic of Germany, Fiji, France, Ghana, Hungary, Indonesia, Iraq, Italy, Japan, Kenya, Kuwait, Lebanon, Malaysia, Mauritius, Republic of Maldives, Nepal, Netherlands, Nigeria, Poland, Pakistan, Philippines, Saudi Arabia, Seychelles, Singapore, Sri Lanka, Switzerland, Syria, Thailand, UK, USA, Yemen Peoples' Demoractic Republic and USSR.

Flying Clubs and Gliding Centres

There are 25 subsidised flying clubs/Flying Training Institutes with headquarters at Amritsar, Banasthali, Bangalore, Bhubaneswar, Bombay, Calcutta, Coimbatore, Gauhati, Hissar, Hyderabad, Indore, Jaipur, Jamshedpur, Jullundur Cantt., Karnal, Lucknow, Ludhiana, Madras, Nagpur, New Delhi, Patiala, Patna, Raipur, Trivandrum and Vadodara.

There is one Departmental gliding centre at Pune and 14 subsidised gliding clubs at Agra, Ahmedabad, Amritsar, Deolali, Hissar, Jaipur, Jullundur, Kanpur, Ludhiana, New Delhi, Patiala, Patna, Pilani and Raipur.

Training Centres

The Civil Aviation Training Centre at Allahabad comprising an aerodrome school and a communications school trains air traffic controllers, radio operators and technicians. Ground training to pilot trainees is also provided.

TOURISM

In 1979, 7,64,781 tourists visited India as compared to 7,47,995 in 1976, an increase of 2.2 per cent. The foreign exchange earnings from tourism were estimated at Rs 338 crores at 1976-77 prices against Rs 330 crores in the preceding year.

India's potential for tourism is as vast as it is varied. While the infrastructure at home is being strengthened, promotional activities are undertaken abroad to attract more tourists. With a view to diversifying tourist attractions, the Department of Tourism has taken up the development of beach and mountain resorts. A sum of Rs 30 crores has been provided for developing tourism in the Sixth Plan as against the original outlay of Rs 44 crores and revised outlay of Rs 23.62 crores in the Fifth Plan. Over the years, the department has been following a two-pronged strategy of strengthening the infrastructure at home and improving the tourist image abroad. To this, a third dimension has been added in the form of domestic tourism development by giving equal weightage to domestic tourism alongwith international

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

tourism in the central sector. This is a new orientation that has been given to tourism since 1977.

Thus the emphasis in the Sixth Plan will continue to be on building up tourist infrastructural development of selected areas as mountain and beach resort and promotion of domestic tourism.

Tourism Bodies

The Department of Tourism of the Union Ministry of Tourism and Civil Aviation has both promotional and organisational functions and works in close co-operation with the Indian Tourism Development Corporation. Several states and union territories have also set up tourism departments and offices.

The Department of Tourism has a chain of regional offices at home and abroad. Regional offices are functioning in Bombay and Delhi with sub-offices at Calcutta, Madras, Agra, Aurangabad, Cochin, Jaipur, Khajuraho and Varanasi. These offices work in close collaboration with state governments, travel agents, hoteliers and carriers. Abroad, India has tourist offices in New York, Los Angeles, Chicago, Toronto, London, Geneva, Paris, Frankfurt, Brussels, Stockholm, Milan, Vienna, Kuwait, Bangkok, Tokyo, Perth, Singapore and Sydney. In addition, tourist promotion offices are based at Dallas, Miami, San Francisco, Washington, Osaka, Melbourne and Tehran. The various tourist offices abroad are functioning under a scheme of close collaboration between the Department of Tourism and Air India for promotion of tourist traffic from the respective regions.

To meet the requirements of these offices, Department of Tourism produces tourist publicity literature in English, German, Spanish, French, Italian, Persian, Arabic, Japanese and Thai languages. In order to boost up domestic tourism, literature in Hindi is also produced. On an average, 60 lakh copies of tourist literature are produced for distribution abroad. Similarly tourist offices maintain film and photo libraries on subjects of tourist interest.

Accommodation and Other Facilities

The Department has constructed forest lodges in the bird sanctuary at Bharatpur, and the wild life sanctuaries at Kaziranga, Sasangir and Jaldapara. The India Tourism Development Corporation is managing the forest lodges at Bharatpur, Kaziranga and Sasangir and the one at Jaldapara is being run by the Tourism Development Corporation, West Bengal.

In addition to the construction of forest lodges, the department has also provided facilities for viewing wild life, such as 4 boats at Bharatpur bird sanctuary, 4 elephants at Kaziranga, 5 elephants at Kanha, and 25 mini-buses have been distributed among 18 wild life sanctuaries in the country.

At present, there are 119 approved tourist car operators spread over 26 tourist centres and a number of approved tourist shops at important tourist centres. Apart from this, there are 147 officially registered travel agencies in the country and an increasing number of trained and approved tourist guides.

Incentives for Tourists

To promote tourist traffic, regulations, relating to police registration, currency exchange control, customs, prohibition and visas have been liberalised. The validity of landing permits has been increased from 28 to 30 days. Tourists from many countries can now come to India without a visa.

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

Concessional tickets for domestic tourists are issued by the railways for round trip journeys and circular tours. Special concessions are given to students. Indrail pass facilities are available for foreign tourists and Indian residents abroad against payment in US dollar and other convertible currencies. The scheme 'Discover India' for travel on IA domestic services in round circle trips with unlimited stop overs en-route is available to all persons permanently residing outside India, including Indians. Foreign residents in India are also eligible if they pay in US dollars or similar convertible currency.

ITDC

The India Tourism Development Corporation, set up in 1966, is the only multi-unit undertaking for the development of tourism in the country. It looks after the construction and management of hotels, motels and travellers' lodges, provision of transport facilities for tourists, production of tourist publicity and promotional material, provision of entertainment and management of duty free shops at international airports.

Presently, the corporation has under its management 20 hotels—six in Delhi, and one each at Aurangabad, Bangalore, Calcutta, Hassan (Karnataka), Kovalam, Jammu, Khajuraho, Mahabalipuram, Mysore, Udaipur, Varanasi, Patna, Bhubaneswar and Madurai. It also arranges sound and light shows at Red Fort, Delhi; Sabarmati Ashram, Ahmedabad and Shalimar Gardens, Srinagar. In addition, it runs 13 travellers lodges, 3 forest lodges, 15 restaurants, 16 transport units and 5 duty free shops at airports.

METEOROLOGY

Meteorological and weather services are provided by the India Meteorological Department which is one of the oldest scientific institutions in the country. It has its headquarters at New Delhi and two functional offices at Pune responsible for climatology and forecasting services respectively. There are five Regional Meteorological Centres at Bombay, Calcutta, Madras, Nagpur and New Delhi. The Calcutta unit compiles and publishes the 'Indian Ephemeris' and 'Air Almanac' in English and the 'Rashtriya Panchang' in English, Hindi and nine other Indian languages. Further in order to have a better coordination with the state governments, Meteorological Centres have been set up at Ahmedabad, Bangalore, Bhopal, Bhubaneswar, Gauhati, Hyderabad, Jaipur,Lucknow, Patna, Srinagar and Trivandrum. The Trivandrum centre maintains liaison with the Thumba Equatorial Rocket Launching Station for meteorological rocket process of the upper atmosphere.

The Department issues 'warnings' against heavy rainfall, strong winds and cyclonic weather for the general public and a number of private and public organisations including aviation, defence services, shipping, ports and fishing crafts, mountaineering expeditions and agriculturists. Flood meteorological offices have been working at Ahmedabad, Bhubaneswar, New Delhi, Gauhati, Lucknow, Jalpaiguri, Patna and Hyderabad to give meteorological support to the Flood Forecasting Organisation of the Central Water Commission.

There are separate directorates of the Department to deal with agricultural meteorology, meteorological training, weather analysis over the Indian Ocean and southern hemishpere, instruments, hydrometeorology, aviation services, seismology, radio-meteorology, satellite meteorology and meteorological telecommunications.

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

Cyclone Forecasts Cyclone warnings to ports and ships are issued by Bombay, Calcutta, Visakhapatnam, Bhubaneswar and Madras offices. These are based on conventional meteorological observations from coastal and island observatories, ships in the Indian seas, coastal cyclone warning radars and cloud pictures received from weather satellites. Cyclone warning radar stations are located at Bombay, Goa, Calcutta, Madras, Karaikal, Paradeep and Visakhapatnam. A cyclone warning radar will be installed at Machilipatnam in the near future. Weather satellite pictures are received through Automatic Picture Transmission stations at Calcutta, Madras, Visakhapatnam, Bombay, Pune, New Delhi and Gauhati. Another such station will be established at Bhubaneswar shortly. A cyclone warning and research centre at Madras investigates problems exclusively relating to tropical cyclones.

Tourists' Meteorological Services Tourism departments at the centre and the states have access to the records of the Meteorological Department for providing weather information of interest to tourists.

Tourist meteorological offices are being set up in various parts of the country to issue weather forecasts for the tourists. One such centre has been set up at Gulmarg in Kashmir.

Exchange of Data Meteorological data are exchanged with many countries through high speed telecommunication facilities. As part of India's cooperation in the World Weather Watch, the Regional Meteorological Centre and the Regional Telecommunication Hub have been established at New Delhi. An area forecast centre has also been set up in New Delhi to exchange data with international airports.

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

21 COMMUNICATIONS

The history of modern postal system in India may be traced back to 1837 when postal services were thrown open to the public. The first postage stamp was issued in Karachi in 1852 though it was valid only in Sind. The postal department was set up in 1854 when about 700 post offices were already functioning in the country. The money order system was introduced in 1880. Five years later, the postal savings bank scheme was put in operation. The railway mail service was started in 1907 and the air mail service in 1911.

Remarkable progress in communication services had been made between 1951 and 1978. During the period, the number of post offices increased by nearly four times; telegraph offices nearly trebled and telephones increased more than fourteen times. The subscriber trunk dialing service, introduced in 1960, is now in operation on 174 cities. The overseas communication system connects India with almost all countries of the world.

The Posts and Telegraphs Board which provides the postal and telecommunication services is one of the largest employers in the country. The number of persons (including extra-departmental and industrial workers) employed by the Board as on 31 March 1978 was 7.32 lakhs.

For operational purposes, the country is divided into 15 telecommunication circles, 16 postal circles, 17 P&T civil circles, 5 P&T electrical circles, one airconditioning circle and 27 telephone districts. Apart from these, there are units for specific purposes. The Ministry of Communications, through the Department of Posts and Telegraphs, also discharges certain agency functions. These are : collecting broadcast receiver licence fees, running post office savings banks, issuing national savings certificates and postal life insurance policies and selling units of the Unit Trust of India. It also sells application forms for examinations conducted by the Staff Selection Commission, Income-Tax forms and also passport application forms at the Head Post Offices in Delhi, Gujarat, Kerala, Maharashtra North-Western and Tamil Nadu circles. In some of the metropolitan cities private car owners can also pay their vehicle tax through specified post offices.

POSTAL SERVICES

The number of post offices on 31 March 1979 was 1,30,988, including 1,17,260 in the rural areas. On an average each post office served 4,180 persons and covered an area of 24.46 sq km.

The number of letter boxes on 1 April 1979 was 4,26,553 of which 3,55,288 have been installed in the rural (including backward, hilly and tribal) areas. It is planned to cover all the census villages in the country (5,75,936) with letter boxes by the end of the Sixth Plan (1982-83). Census villages covering 99.76 per cent had been provided with daily delivery of dak by 31 March 1979. The remaining 0.24 per cent of these villages are expected to be covered by this scheme in the near future.

During the Sixth Plan (1978-83), the expansion of postal facilities in the rural areas of the country is to cover the following schemes :

(i) Opening of post offices including mobile post offices. — 25,000

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

(ii) provision of postal counter facilities to villages through mobile post office. — 50,000
(iii) installation of letter boxes. — 2,50,000
(iv) appointment of rural agents for improving daily delivery service and clearance of letter boxes. — 50,000

Approximately 1/5th of the above targets are proposed to be achieved annually, *i.e.*, from 1978-79 to 1982-83.

Conveyance of Mail

The conditions for opening new post offices in backward areas have been liberalised. About 50 per cent of the new post offices proposed in the Sixth Plan are to be located in the backward areas.

The traffic mail, due to industrialisation and increase in population as well as rate of literacy, has increased enormously in the country. The mail is carried both by surface and air. For surface mail, various modes of conveyance are used. The total surface route length covered in 1978-79 was 11.1 lakh km of which 16 per cent was by rail, 40 per cent by road transport, 31.5 per cent by runners and 12.5 per cent by other modes of conveyance including boats, camels, horses and cycles. All the principal cities connected by air are served direct and other cities connected subsequently by surface.

Under the "all up scheme" all inland letters, letter cards, postcards, registered letters and money orders are normally carried by air without surcharge. The total weight of airmail carried in 1978-79 was 113 lakh kg.

Quick Mail Service

A new scheme called Quick Mail Service, (QMS) was introduced in 1975. This covers all state capitals, headquarters of all union territories and important commercial towns. All unregistered articles bearing the Postal Index Number (PIN) of the destination and posted in special QMS letter boxes are covered by the scheme. Letters posted under this scheme are normally delivered the very next day. Within the states, the regional quick mail service connects most of the district headquarters to the state capitals. There are at present 45 national and 410 regional quick mail srevice centres in the country. They handle about 4.00 lakh articles daily.

Foreign Mail Arrangements

India is a member of the Universal Postal Union (UPU) since 1876. It has postal communication facilities with 158 countries of the world. Both surface and air routes are used to despatch and receive postal articles.

India is also a member of the Asian and Oceanic Postal Union (AOPU), a restricted postal union of 15 countries within the framework of UPU since 1973. India joined this Union to facilitate and improve the postal relations between the member countries of the region.

The frequency of air despatches varies from 2 to 7 a week depending on the quantum of mails and the availability of flights to the country concerned. India sends air mail despatches to 92 countries in the world. Frequency of surface despatches varies from daily despatches to the neighbouring countries to once a month and in a few cases to once a quarter or so, depending on the availability of sailings from Indian ports. India is having money order service with 35 countries which brings in about Rs 10.00 crores in foreign exchange to the country.

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

Pin Code

For efficient and correct handling of the growing volume of mail a numerical postal address code known as the Postal Index Number (PIN) code was introduced in 1972. The code has six digits which helps to identify and locate every departmental delivery post office excluding branch post offices. The first digit indicates the region, the second digit the sub-region and the first three digits taken together the central sorting district. The last three digits indicate a particular delivery post office in the area served by the sorting district.

Table 21.1 gives important data relating to postal services in the country.

Post Offices in Backward Areas

Under the revised policy for opening of post offices in rural areas made effective from 28 August 1978, norms have been liberalised for opening of post offices in backward, hilly and tribal areas. Previously, relaxations were applicable only to backward and hilly areas. A post office can now be opened in a *gram panchayat* village if there is no other post office within three km. The proposed post office is expected to yield an income equal to at least 10 per cent of the estimated cost. In a non-*gram-panchayat* village, other conditions remaining the same, the population should not be less than 1,000

In the Sixth Five Year Plan, it is proposed to open 25,000 post offices. Out of these 65 per cent are to be opened in backward, hilly and tribal areas.

Post Office Savings Bank

With over 1.30 lakh post offices transacting saving bank business, the post office savings bank is the largest savings institution in the country. The post office savings bank runs all savings schemes and has currently an investment of more than Rs 6,200 crores. Roughly 4/5th of the branches are located in rural areas.

The expansion of post office savings bank business since 1961 is shown in table 21.2.

TABLE 21.1
POSTAL STATISTICS

	1950-51	1960-61	1970-71	1976-77	1977-78
Number of Post Offices					
Urban	5,284	7,326	10,224	12,508	13,206
Rural	30,810	69,513	98,835	1,08,491	1,12,077
Total	36,094	76,839	1,09,059	1,20,999	1,25,283
Postal articles (crores)	22·700	402·90	645·74	773·80	805·38
Regd. articles (crores)	8·02	11·66	18·28	20·87	21·81
Insured articles (lakhs)	37·23	41·00	64·00	68·48	71·00
Money orders (crores)	5·31	7·65	9.47	10·68	10·83
Value of money orders (Rs. crores)	205·9	334·25	613·1	976·60	1047·33
Postal revenue (Rs. crores)	21·22	40·78	110·54	913·96	206·90

TABLE 21.2
EXPANSION OF POST OFFICE SAVINGS BANK

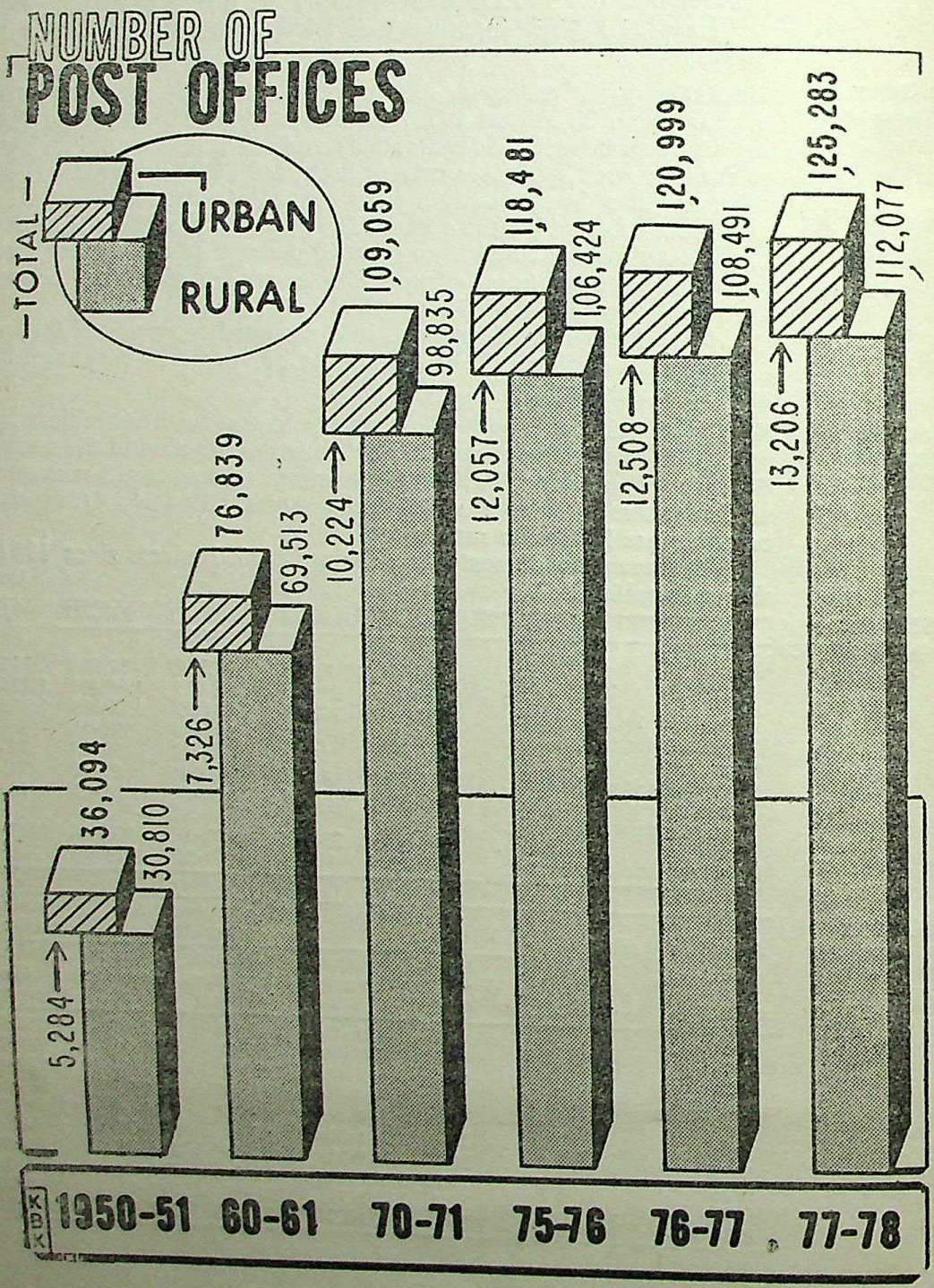
As on 31 March	Saving bank		Cumulative time deposits		Saving certificates
	No. of depositors (lakhs)	Balance (Rs crores)	No of depositors (lakhs)	Balance (Rs crores)	Balance (Rs crores)
1961	92	431·40	3·98	2·65	456·92
1970	197	891·00	51·18	98·31	921·89
1971	206	974·00	51·30	116·54	888·49
1972	218	1,025·00	51·65	133·73	883·50
1973	231	1,119·00	49·09	144·19	1,002·00
1974	250	1,264·00	47·8	156·78	941·9
1975	278	1,265·91	41·91	165·81	899·80
1976	295	1,327·29	37·76	173·78	880·24
1977	2511	1,302·31	31·19	195·42	909·78
1978	264	1452·12	28·17	207·14	916·30

1 Actual figures

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

Postal Life Insurance

The number of postal life insurance policies in force as on 31 March, 1979 was 6,34,444 for a total sum assured of Rs 315.4 crores. During 1978-79 nearly 1,02,000 new policies were issued for a sum assured of Rs 69.63 crores. This shows an increase of about 40 per cent over the previous year, indicating the growing popularity of postal life insurance. The growth of business of postal life insurance policies is shown in Table 21.3.



CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

COMMEMORATIVE STAMPS

The Indian Posts and Telegraphs Department has been issuing special commemorative postage stamps since 1931 on eminent personalities and important events. Since the attainment of independence in 1947, Indian philately has made great strides. Indian stamps depict a wide range of themes relating to the life and culture of the Indian people their achievements in various fields and also important national and international events. The stamps are popular both at home and abroad.

TABLE 21.3
GROWTH OF POSTAL LIFE INSURANCE SCHEME

Year	New Business		Total business in force		Insurance Fund (Rs crores)
	Number of policies	Sum assured (Rs crores)	Number of policies	Sum assured (Rs crores)	
1901 . . .	867	0·15	4,656	0·73	0·14
1947-48 . . .	3,722	0·84	92,036	18·90	11·59
1957-58 . . .	8,146	1·85	1,45,534	34·22	13·67
1967-68 . . .	15,799	5·4	2,00,885	53·04	26·02
1974-75 . . .	36,440	18·0	3,40,446	119·09	45·05
1975-76 . . .	61,337	35·06	3,92,185	153·02	51·06
1976-77 . . .	72,780	42·00	4,54,447	192·04	59·03
1977-78 . . .	99,829	59·09	5,43,486	249·02	70·04
1978-79 . . .	1,01,997	69·93	6,34,444	315·04	84·03

During 1979, which marked the completion of one hundred years of the postcard service and fifty years of the regular airmail service within the country, 22 special/commemorative stamps were brought out. To commemorate the International Year of the Child, a set of two stamps was issued. The year 1979 also marked the introduction of the Sixth Definitive Series of stamps on the theme of "Agriculture and Rural Development".

Exhibitions

One of the most important means of promoting philately is by holding philatelic exhibitions periodically and encouraging Indian participation in international exhibitions. The Indian P & T Department participated in six international philatelic exhibitions abroad where display and sale of Indian stamps was arranged. At home the Department organised the third India National Philatelic Exhibition at Bangalore from 12 to 16 October 1977. The First Asian Philatelic Exhibition was also organised at Bangalore from 19 to 23 October, 1977. The India International Stamp Exhibition in collaboration with Philatelic Congress was organised from 25 January to 3 February 1980.

At present, a network of 30 philatelic bureaux and 139 philatelic counters are operating in different parts of the country. Besides, agents have been appointed in North America, Western Europe, Japan and Australia for sale of Indian stamps in these regions.

TELEGRAPH SERVICES

Indian Telegraphs is one of the oldest government-owned public utility organisations in the world. The first telegraph line was opened in 1851 between Calcutta and Diamond Harbour.

There were 27,094 telegraph offices (including licensed telegraph offices working under Railways and Canal Administrations) as on 31 March 1979. About 6.4 crore telegrams were booked during 1978-79.

During the Fifth Plan (1 April 1974 to 31 March 1978) 5,518 new telegraph offices were opened in the country. During the Sixth Plan period, it is proposed to open 15,000 more telegraph offices out

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

Teleprinters

of which about 3,000 are to be in tribal areas. During 1978-79, 3,851 combined (Telegraph) offices were opened in the country.

The Hindustan Teleprinters Ltd., a public sector undertaking, was established at Madras in 1960 to manufacture teleprinters. It produced 6,725 units of teleprinters and 103 electric type-writers during 1978-79. The company sold equipment worth Rs 5.47 crores during 1978-79.

Telex Service

The national telex service was opened in 1963. The first Devanagari telex was inaugurated in New Delhi in 1969. With the commissioning of teleprinter exchanges at important cities, printed messages can be sent and received directly from one subscriber to another in any part of the country. Telex service was available between 117 cities on 31 March 1978. These cities had an installed capacity of 21,035 lines, with 16,449 working telex connections.

Facsimile Service

Facsimile service was introduced in 1969 for the first time in the country at Madras, facilitating simultaneous printing of a newspaper at Madras and Coimbatore. It was extended to Bangalore in 1970. The service is available to Hyderabad also.

TELEPHONE SERVICES

India had a 50-line telephone exchange in Calcutta as early as 1881, five years after the invention of telephone by Graham Bell. The first telephone exchange with automatic lines was installed at Simla in 1913. At the time of independence, there were 321 exchanges and 86,000 telephones. It was after 1951, however, that telephone services made rapid progress. The number of telephone exchanges has increased by more than eleven times and that of telephones by more than fourteen times as shown in Table 21.4.

The first indigenously developed computer-controlled electronic telephone exchange in Delhi is under field trial.

TABLE 21.4 TELEPHONES STATISTICS

(As on 1 April)

	1951	1961	1971	1977	1978	1979
No. of telephone exchanges	540	1,374	3,967	5,819	6,239	6,866
No. of telephones (in lakhs)	1·68	4·63	13·00	21·25	23·01	24·24

The number of long distance public call offices was 8,730 on 31 March 1979. The number of trunk calls increased from 71 lakh in 1950-51 to 20.30 crores in 1978-79. The telephone revenue during the same period increased from Rs 9.00 crores to Rs 523.66 crores.

STD Service

The subscriber trunk dialling service (STD), first introduced between Kanpur and Lucknow in 1960, is now in operation in 174 cities for a total of 1,133 routes. There are 17 trunk automatic exchanges in the country. International subscriber dialling has been introduced on Delhi-London and Bombay-London routes. Subscribers in Delhi and Bombay can now dial London without the help of an operator.

'On Demand' Trunk Service

The 'on demand' trunk service was introduced for the first time on Bombay-Bangalore route in 1971. Since then the service has been extended to 905 trunk routes in the country.

Ship-to-shore Service

Ship-to-shore service is available at Bombay, Calcutta and Madras, under which subscribers can have telephonic contacts with ships at sea within 750 km.

CC-0. Agamdas Digital Preservation Foundation, Chandigarh

OYT Service

The 'own your telephone' scheme (OYT), introduced in 1945, now covers all the telephone systems in the country. It has, however, been suspended in the telephone districts of Bombay, Calcutta, Delhi and Ludhiana so that non-OYT applicants who had been waiting to get telephone for more than 10 years could get the same in the near future.

A new scheme called "advance deposit scheme" was launched with effect from 1 September 1975. According to this scheme payment of advance deposit is necessary before a demand for the telephone connection can be registered. The amount of deposit varies from Rs 800 to Rs 5,000 and is adjusted towards telephone charges as and when a telephone is sanctioned.

Telephone Manufacture

The Indian Telephone Industries Ltd. (ITI), Bangalore, a public sector undertaking, was set up in 1948 to manufacture telecommunication equipment, including telephone instruments of various kinds, automatic exchanges, small electronic exchanges, microwave equipment and equipment for railway electrification. It has factories now at Bangalore, Naini, Rae Bareli, Palghat and Srinagar.

During 1978-79, ITI manufactured 4.12 lakh telephone instruments, besides other equipment. The total sales of ITI during the period amounted to Rs 90.00 crores, including exports worth Rs 1.60 crore.

OVERSEAS COMMUNICATIONS

India's external telecommunication services are operated by the overseas communications service (OCS) with its headquarters at Bombay.

The OCS operates through four international gateway centres located at Bombay, Calcutta, Madras and New Delhi and provides overseas telegraph, telephone, telex, radio-photo, leased telegraph and high speed data channel services, in addition to international television service via the satellite medium. It also arranges broadcast transmission and reception facilities for the government and news agencies.

Almost 99 per cent of India's external telecommunications is handled by OCS via the INTELSAT satellite positioned over the Indian Ocean region by means of its two satellite earth stations at Arvi (established in 1971) and Dehra Dun (established in 1976).

Through a network of satellite and high frequency radio circuits, the OCS provides telegraph services to almost all countries, telephone services to 213 countries, telex services to 194 countries and radio-photo to 58 countries.

Leased Teleprinter Channels

The overseas communication service leases teleprinter channels for the exclusive use of private subscribes. Several international airline companies, government departments, foreign embassies and international business houses are using this facility. There were 88 leased teleprinter channels, operating via satellites and 2 via HF as on 1 January 1980.

Programme Transmissions

Facilities are provided on the overseas telephone system for the transmission and reception of programmes consisting of voicecasts by correspondents of broadcasting organisations for use on their broadcast networks.

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

Press Broadcasts

The overseas communication service provides multi-address teleprinter news broadcast transmissions, on behalf of the Ministry of External Affairs, simultaneously to 66 Indian Consular posts around the world.

The OCS also carries out reception of foreign radio teleprinter press broadcasts on behalf of news agencies.

WIRELESS PLANNING AND CO-ORDINATION

The Wireless Planning and Co-ordination Wing of the union Ministry of Communications is responsible for all matters concerning the International Telecommunications Union, Geneva, a specialised UN agency. It also functions as the radio regulatory authority for all radio usages in the country and in that capacity assigns radio frequencies and issues operating licences to all official and non-official wireless users. Cases of radio interference are investigated and resolved through national and, if necessary, through international co-ordination. Problems about frequency usages for satellite communication and other space systems are also co-ordinated both at national and international levels.

Monitoring Organisation

The Monitoring Organisation of the Ministry of Communications has a network of monitoring stations set up for frequency management and implementation of radio regulations. Nineteen such station are functioning at Ahmedabad, Ajmer, Bangalore, Bombay, Calcutta, Darjeeling, Delhi, Dibrugarh, Goa, Gorakhpur, Hyderabad, Jullundur, Madras, Mangalore, Nagpur, Ranchi, Shillong, Srinagar and Trivandrum.

Three units have been set up at Delhi, Calcutta and Hyderabad, to investigate the quantum of man-made radio noise responsible for interference with radio communications and suggest counter measures.

Ten units have been set up at Ajmer, Bangalore, Bombay, Calcutta, Delhi, Hyderabad, Jullundur, Madras, Nagpur and Shillong for carrying out region-wise inspection of licensed and authorised stations to ensure that they conform to the terms and conditions of the licences.

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

22 LABOUR

The working population of India in 1971 was about 18.05 crores or 32.92 per cent of the total population of the country. Of the working population only ten per cent was in the organised sector and the rest in the traditional sector. Cultivators and agricultural labourers formed the bulk of the traditional workers — 43.38 per cent and 26.32 per cent respectively.

Reliable data are, however, available only for the organised sector of India's economy. Most of the acts passed by the government for the welfare of workers relate to workers in this sector. A number of social security schemes are also in operation for them. These include factory acts, wage acts and social security schemes like employees' state insurance, employees' provident funds, death relief and family pension for workers and their families. Some acts and rules have also been framed for the unorganised sector. The Minimum Wages Act, 1948 is also applicable to many categories of Workers in this sector.

In the organised sector of India's economy, the largest number of workers are employed in factories.[1] In 1977, the estimated average daily employment in working factories, for which figures are available, stood at 61.63 lakhs.[2]

According to the 1977 daily employment figures, Maharashtra had the largest number of factory workers (11,26,150) followed by West Bengal (8,56,329), Gujarat (5,65,158), Tamil Nadu (5,57,356) and Uttar Pradesh (5,11,619).

The average daily number of workers employed in all mines, in 1976 was 7,63,000 (3,04,000 below ground, 2,26,000 open-cast working. 2,33,000 above ground). The corresponding figures for coal mines covered by the Mines Act, 1952 for 1976 were 5,10,420 (2,75,922 below ground, 71,246 open-cast working and 1,63,252 above ground).

Table 22.1 gives the distribution of working population according to activity and sex.

WORKING CONDITIONS

Working conditions in factories are regulated by the Factories Act, 1948 which prescribes a 48-hour week for adult workers and forbids the employment of children under 14 in any factory. Minimum standards of lighting, ventilation, safety, health and welfare services which the employers must provide in their factories have also been laid down. Factories employing over 30 women workers are requested to provide a creche for their children. Shelters, rest rooms and lunch rooms are to be provided by factories employing over 150 workers.

[1]Under the Factories Act, 1948, a factory is defined as any premises including the precincts thereof where 10 or more workers are working or were working on any day of the preceding twelve months and in any part of which power is used for the manufacture. Where power is not used the number of workers should be 20 or more.

A worker is defined in the Act as a person, employed directly or through any agency whether for wages or not, to any manufacturing process, or in cleaning any part of the machinery or premises used for a manufacturing process or in any other kind of work incidental to or connected with the manufacturing process or the subject of the manufacturing process.

[2]Provisional

TABLE 22·1

DISTRIBUTION OF WORKING POPULATION (1971 CENSUS)

(*In lakhs*)

Category	Male		Female		Total	
	Number	Percentage share in total male population	Number	Percentage share in total female population	Number	Percentage share in total population
Total population	2,841	100·00	2,641	100·00	5,482	100·00
A. Total working population	1,492	52·51	313	11·86	1,805	32·92
(i) Cultivators	690	24·28	93	3·52	783	14·28
(ii) Agricultural labourers	317	11·16	158	5·97	475	8·67
(iii) Livestock, forestry, fishing, hunting and plantations, orchards and allied activities	35	1·24	8	0·30	43	0·78
(iv) Mining and quarrying	8	0·28	1	0·05	9	0·17
(v) (a) Household industry	50	1·77	13	0·50	64	1·16
(b) Other than household industry	99	3·47	9	0·33	107	1·95
(vi) Construction	20	0·71	2	0·08	22	0·04
(vii) Trade and commerce	95	3·34	6	0·21	101	1·83
(viii) Transport, storage and communications	43	1·50	1	0·06	44	0·80
(ix) Other services	135	4·76	22	0·84	158	2·88
Non-working population	1,349	47·49	2,328	88·14	3,677	67·08

CC-0. Agamnigam Digital Preservation Foundation, Chandigarh
INDIA 1980

TABLE 22·2

AVERAGE PER CAPITA ANNUAL EARNINGS OF FACTORY WORKERS

(in rupees)

State/Union Territory	1961	1966	1970	1971	1972	1973	1974	1975	1976[1]	1977[1]
Andhra Pradesh	1,149	1,454	2,117	2,339	2,430	2,792	2,521	2,824	3,731	3,657
Assam	1,599	2,130	2,363	2,484	2,481	2,449	2,422	2,627	3,504	3,983
Bihar	1,856	2,050	2,712	2,752	2,630	2,539	2,176	2,158	5,262	4,345
Gujarat	1,702	2,340	2,820	2,763	2,886	3,392	2,669	2,749	4,793	5,086
Haryana	—	1,712	2,597	2,569	2,848	3,004	3,374	3,371	4,931	6,087
Himachal Pradesh	1,288	2,115	2,691	2,849	2,849[3]	3,343	3,737	2,745	4,395	4,395[3]
Jammu and Kashmir	—	978	1,630	1,695	2,081	2,151	2,788	2,947	2,087	2,671
Karnataka	1,375	1,840	2,881	2,654	2,698	2,877	2,859	2,893	5,153	5,185
Kerala	1,152	1,724	2,419	2,565	2,555	2,788	2,959	2,947	5,185	4,855
Madhya Pradesh	1,816	2,118	2,912	3,013	3,175	3,761	3,942	3,942[3]	6,378	6,205
Maharashtra	1,775	2,480	3,030	3,090	3,249	3,461	3,397	3,459	5,680	6,684
Orissa	1,180	2,000	2,800	3,242	3,590	3,323	3,193	4,194	5,417	5,684
Punjab	1,142[2]	1,636	2,159	2,219	2,409	2,464	2,576	3,087	3,675	3,977
Rajasthan	761	1,412	2,486	2,507	2,814	3,142	3,419	3,325	4,954	5,312
Tamil Nadu	1,465	2,032	2,583	2,670	2,860	2,912	2,716	2,543	4,817	5,303
Tripura	—	1,271	2,223	2,790	2,221	2,420	2,824	2,453	2,251	1,469
Uttar Pradesh	1,264	1,826	2,293	2,483	2,563	2,847	3,091	3,054	4,737	5,456
West Bengal	1,410	2,204	2,761	3,028	3,452	3,632	3,835	3,966	5,840	6,312
Andaman and Nicobar Islands	1,234	1,621	2,170	2,315	2,115	2,129	3,247	3,300	2,831	1,423
Delhi	1,655	2,321	2,885	3,040	3,047	3,183	3,165	3,239	5,092	5,738
Goa, Daman and Diu	—	2,105	2,305	2,204	2,555	2,976	3,223	3,792	5,965	6,419
Pondicherry	—	—	2,427	2,673	2,776	3,428	3,374	2,615	4,879	6,135

[1]Provisional.

[2]Includes Haryana also.

[3]Repeated.

Source : Labour Bureau.

Note : The data given in the above table relate to workers earning less than Rs. 400 per month up to 1975 and 1976 onwards relate to workers earning less than Rs. 1,000 per month.

LABOUR CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

Factories with more than 250 employees have to provide canteens for their workers.

WAGES AND EARNINGS

Table 22.2 gives the average per capita annual earnings of factory workers drawing less than Rs 400 per month in different states and union territories.

Money Earnings

The variation in money earnings is shown in table 22.3.

(1961-100)

TABLE 22.3 INDEX OF MONEY EARNINGS OF WORKERS

Description	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975
General index of earnings	114	128	139	151	160	170	180	185	199	210	207	207

Regulation of Wages

The payment of wages is governed by the Payment of Wages Act, 1936 and the Minimum Wages Act 1948 as amended subsequently. The payment of wages (Amendment) Act, 1976 extends to the whole of India and applies to persons employed in any factory as defined in the Factories Act, 1948 and in any railway, receiving wages and salaries which average below Rs. 1,000 a month.

Employers cannot withhold the wages earned by workers nor can they make any unauthorised deductions. Payments must be made before the expiry of a specified day after the last day of the wage period. Fines can be imposed for only those acts of omission which have been approved by the appropriate government and must not exceed an amount equal to three paise in a rupee of the wage payable. If the payment of wages is delayed or wrongful deductions are made, the workers or their trade unions can file a claim. The payment of overtime in scheduled employment is governed by the Minimum Wages Act, 1948.

Minimum Wages

The Minimum Wages Act, 1948 empowers the government to fix minimum wages of employees working in specified employments. It provides for review and revision of minimum wages already fixed after suitable intervals not exceeding five years. Wage rates under the Act have been fixed and also revised for several categories.

The Act provides for imposition of penalties on erring employers.

Equal Remuneration

Through an ordinance on 26 September 1975, which became an Act on 11 February 1976, equal remuneration was assured to men and women workers throughout the country.

The Act provides for the payment of equal remuneration to men and women workers for the same work or work of similar nature. It prevents discrimination on the ground of sex against women in the matter of employment and for matters connected therewith except where the employment of women in such work is prohibited or restricted by or under any law for the time being in force.

The Act has so far been enforced in several spheres, including plantations (covered under the Plantations Labour Act, 1951), local authorities, central and state governments, banks, educational institutions, mines, hospitals, hotels and restaurants, manufacture of textiles and textile products, wholesale and retail trade, construction, agricul-

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

ture and air transport industry. In June 1978, it was extended to community, social and personal services.

Bonus

Bonus is paid to the workers under the Payment of Bonus Act, 1965 It applies to every factory and every other establishment in which twenty or more persons are employed on any day during an accounting year.

For the accounting year beginning on any day in 1978, the status quo has been maintained through the Payment of Bonus (Amendment) Ordinance, 1979 promulgated on 30 August 1979. This provided for a minimum bonus of 8.33 per cent whether the establishment made a profit or not during the year, and a maximum of 20 per cent.

Occupational Wage Surveys

Occupational wages surveys are conducted by the Labour Bureau at periodic intervals to collect occupational data on wage rates and earnings in important manufacturing, mining and plantation industries in the country. The first and second surveys (both covering 44 industries) were conducted during 1958-59 and 1963-65 respectively and their reports have been released. In view of the utility of the data collected during the first two surveys, the National Commission on Labour recommended the conduct of such surveys at periodic intervals. Accordingly the Bureau took up the third survey (covering 81 industries), the field work for which was completed in four phases from 1974 to 1979. With a view to reducing the time lag it was decided to release brochures on dearness allowance and bonus before the availability of detailed figures of all the components of earnings. Brochures on dearness allowance and bonus have been prepared on all the 45 industries covered during the first, second and third phases of the survey. The main report on plantation industries covered during the first phase of the survey has also been released. Work relating to the preparation of brochures and main reports on the remaining industries is in progress.

Contract Labour

The Contract Labour (Regulation and Abolition) Act, 1970, which became applicable to the whole of India in February 1971, provides for the regulation of employment of contract labour in certain establishments and for its abolition in certain circumstances. It also fixes responsibility on the principal employer for payment of wages in case of defaults.

The Labour Bureau has conducted special studies on the extent and nature of contract labour in 26 different industries so far.

Bonded Labour

The bonded labour system has been abolished all over the country through the Bonded Labour System (Abolition) Act, 1976. Under the Act, every bonded labourer stands freed and discharged from any obligation to render any bonded labour.

Upto December 1979 1,18,697 bonded labourers had been identified and freed in various parts of the country. Of them, 83,249 had been rehabilitated.

INDUSTRIAL RELATIONS

Industrial Disputes

The Industrial Disputes Act, 1947 is the principal central legislation which provides a machinery for the settlement of industrial disputes. In addition, the Code of Discipline (1958) and the Industrial Truce Resolution (1962) also help in the promotion and maintenance of good industrial relations.

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

Industrial Employment Standing Order

Model rules have been framed by the central government under the Industrial Employment (Standing Orders) Act 1946 for adoption by industrial establishments employing one hundred or more workers to ensure industrial peace. An amendment of the Act in 1961 empowered the appropriate government to extend it to establishments employing less than 100 workers. Another amendment in 1963 made the Model Standing Orders, framed by the appropriate government, operative in all industrial establishments covered by them until the Standing Orders framed by the industrial establishments are certified.

The Act now applies to all establishments in Andhra Pradesh, Gujarat, Maharashtra and West Bengal employing 50 workers or more. In Assam, it covers establishments (except mines, quarries, oil-fields and railways) which employ ten workers or more. In Tamil Nadu all factories registered under the Factories Act, 1948 are covered. In Uttar Pradesh the Act has been extended to all member establishments of the Employers' Association of Northern India and of Uttar Pradesh Oil-mill Owners' Association, electric supply undertakings, water works and industrial establishments engaged in glass industry, oil mills registered as 'factories', establishments employing more than 50 workers in textiles, engineering, printing presses, ginning and pressing, shellac industries, flour, dal and rice mills, and all industrial establishments voluntarily applying for certification of Standing Orders.

Code of Discipline

The Code of Discipline, requiring employers and workers to utilise the existing machinery for the settlement of disputes and avoiding direct action was evolved at the Indian Labour Conference in 1958. It has been accepted by all the central organisations of employers and workers and several others.

The implementation organisations, at the centre and in the states, assist in settling disputes. The central organisations of employers and workers and public sector undertakings, except the AITUC, have also set up committees or cells to screen cases for dissuading their affiliate members from filing appeals in higher courts against the judgments of lower courts like industrial tribunals, labour courts, etc., in keeping with the letter and spirit of the code. A similar procedure for screening cases of appeals proposed to be filed by central undertakings has been in operation since 1964.

The Code is also applicable to public sector undertakings run as companies and corporations except those under the Ministry of Defence, Railways and Ports and Docks. The Department of Defence Production, has agreed to apply the Code, with some clarifications, to its public sector undertakings run as companies and corporations. The Code has also been applied, with certain modifications, to the insurance industry, the State Bank of India and the Reserve Bank of India. However, the Code could not be applied to other banks in the absence of any agreement between the employers' and employees' representatives in respect of clarifications pertaining to the criteria for recognition of unions.

Industrial Truce

To ensure industrial truce during emergency in the country, an Industrial Truce Resolution was adopted by the central organisations of employers and workers in 1962. It laid down that there would be no interruption or slowing down of production: on the other hand, production will be maximised and defence effort promoted in all possi-

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

ble ways. A standing committee with the Union Minister of Labour and Employment as chairman was set up in August 1963 to review the working of the Truce Resolution. It has since been merged with the Central Implementation and Evaluation Committee.

National Arbitration Promotion Board

A National Arbitration Promotion Board was set up by the Government of India in 1967 to promote voluntary arbitration as a means for settling of industrial disputes. The Board Comprises representatives of the employers' and workers' organisations, public sector undertaking and central and state governments. All the state governments as well as union territory administrations, except Uttar Pradesh and West Bengal, have either set up State Arbitration Promotion Boards or made some other institutional arrangements for the purpose.

Grievance Procedure

Under the Code of Discipline, managements have to establish a procedure to ensure full investigation of disputes to help in their settlement.

Periodic studies are conducted to review the progress made in this regard. The sixth study in the series, which was brought out in July 1975, showed an improvement in the establishment of grievance procedure in coal and non-coal mines, including oil fields in the private sector. Work on the 7th study in the series, covering the period June 1974 to March 1978, is in progress.

Works Committee

Works Committees have been set up in industrial establishments employing one hundred or more workers. They comprise equal representatives of employers and workmen and aim at promoting measures for securing and preserving amity and good relations between the two parties. On 31st December 1978, Works Committees were functioning in 647 establishments.

Workers' Participation

A scheme for workers' participation in industry at shop-floor and plant levels, applicable to manufacturing and mining units employing 500 or more workers, was introduced in October 1975. Another scheme for workers' participation in management in commercial and service organisations in the public sector, having large scale public dealings and employing at least 100 persons, was announced in January 1977.

The issues thrown up by the working of the 1975 scheme were discussed at a tripartite labour conference held in May 1977. On the recommendation of the conference, a committee on workers' participation in management and equity, consisting of representatives of central organisations of employers and trade unions, some of the states and professional institutions of management, was appointed in September 1977, under the chairmanship of the Union Minister of Labour. The report which was submitted to government showed that majority of the members favoured adoption of a three-tier system of participation, *viz.*, at the corporate level, plant level and shop-floor level. The committee laid down the detailed functions of the various councils at shop-floor, plant and corporate levels. It recommended that workers' representatives at the participative forums should be elected through secret ballot. It also recommended that equity participation should be limited to private sector establishments and that it should be optional. It recommended further that an organisation be set up, both at the centre and in the states, to monitor

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

the implementation of the scheme as also to review its working. The recommendations of the committee are, at present, under the consideration of the government.

Workers' Representation in Management

The central government has introduced a scheme for the appointment of workers' representatives on the boards of management of a few public sector undertakings on a trial basis. To begin with, this has been introduced in the Hindustan Antibiotics Ltd., Pimpri and in the nationalised banks.

Conciliation and Adjudication

The Central Industrial Relations Machinery, also known as the Central Chief Labour Commissioner's Organisation, is responsible for the prevention, investigation and settlement of industrial disputes under the Industrial Disputes Act, 1947. It also enforces some labour laws in the central sphere.

When industrial disputes cannot be resolved by mutual negotiations, the conciliation machinery steps in. It is compulsory for the conciliation officer to hold conciliation proceedings when an industrial dispute exists or is apprehended in a public utility service and a notice under section 22 of the Industrial Disputes Act, 1947 has been received, but it is optional in the case of other industrial establishments.

The Industrial Disputes Act also provides for voluntary or compulsory adjudication of industrial disputes. Eight Industrial Tribunals-*cum*-Labour Courts have been set up to adjudicate disputes in the central sphere. Of these, three are at Dhanbad, two at Bombay and one each at Calcutta, Jabalpur and Delhi. The states have their own tribunals and labour courts. The Industrial Tribunal-*cum*-Labour Court at Delhi, under the Delhi Administration, also deals with some cases in the central sphere. National tribunals are set up by the central government when required.

To promote better industrial relations, the central government set up a National Commission on Labour in 1966 with Dr. P. B. Gajendragadkar as chairman. Its report was presented to the government in 1969. Government has accepted several recommendations made by the commission and taken follow-up action.

Lay Off and Retrenchment

In order to prevent avoidable hardships to the employees and to maintain higher tempo of production and productivity, the Industrial Disputes Act, 1947, has been amended to prevent lay-offs and retrenchments. Under the new Act, known as the Industrial Disputes (Amendment) Act 1976, reasonable restrictions have been put on an employer's right to lay off, retrenchment and closure. Now the employer has to seek prior approval of the appropriate government by giving at least a three months' notice before the intended closure, stating clearly the reasons for laying off, retrenchment and closing of industrial establishment where three hundred or more workmen are employed. In the interest of rehabilitation of workmen and maintenance of supplies and services essential to the life of the community, the Act also provides for restarting the undertakings which have already closed down otherwise than on account of circumstances beyond the control of the employer. Under the new Act no workman employed in any industrial establishment who has been in continuous service for not less than one year, shall be retrenched without giving three months' notice in writing, indicating the reasons for retrench-

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

ment. He is also entitled to compensation equivalent to 15 days of every completed year of continuous service or any part thereof in excess of six months. The provisions with regard to closure in the amendment Act are not operative as a result of the Supreme Court judgment in Excel Workers Versus Union of India case 1978.

National Labour Institute

The National Labour Institute, a registered society under the overall control of the Ministry of Labour, was set up in New Delhi on 1 July 1974 to disseminate knowledge of the necessary techniques and skills to those required to handle labour relations at central and state levels on a tripartite basis. It is an inter-disciplinary action-*cum*-research body mainly concentrating on problems of rural landless labourers, participative management and industrial democracy and dissemination of participative management spirit in government system. The Institute is also involved in inter-related and inter-linked activities of educational and training, research, consultancy and publications. It brings out two monthly journals—*National Labour Institute Bulletin* and *Awards Digest,* besides publishing occasional papers. The Institute organises rural labour camps *inter-alia* to train organisers of rural labour and to diagnose the problems of the rural poor and to promote action, research and participation efforts towards their development.

TRADE UNIONS

The Trade Unions Act, 1926 provides for the registration of trade unions. Any seven or more members of a trade union may, by subscribing their names to the rules of the trade union and otherwise complying with the provisions of the Act with respect to registration, apply for registration of the trade union under the Trade Unions Act. The Act gives protection to registered trade unions in certain cases against civil or criminal action.

Table 22.4 shows the number and membership of the registered trade unions in India.

TABLE 22.4
REGISTERED TRADE UNIONS AND MEMBERSHIP

Particulars	Workers' unions			Employers' unions		
	1961-62	1975[1]	1976[1]	1961-62	1975[1]	1976[1]
Number of unions on register	11,416	25,460[2]	25,665[2]	198	569	528[2]
Number of unions submitting returns	6,954	6,097	6,609	133	125	89
Membership of unions submitting returns (000's)	3,960	4,569	4,697	18	48	38

Note : Excludes 1,616 estimated unions on register during 1975 and 1976 as the break-up for workers' and employers' unions is not available.

[1]Provisional and excludes Andhra Pradesh, Himachal Pradesh, Jammu and Kashmir, Kerala, Madhya Pradesh, Rajasthan, Uttar Pradesh and West Bengal for 1975 and Himachal Pradesh, Jammu and Kashmir, Kerala, Madhya Pradesh, Nagaland, Rajasthan, Uttar Pradesh, West Bengal and Delhi for 1976.
[2]Estimated.

SOCIAL SECURITY

There are several schemes providing social security to the workers against such contingencies as ill health, industrial accidents, maternity, etc.

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

Employees' State Insurance Scheme (ESI)

The Employees' State Insurance Act 1948, which till recently covered non-seasonal factories using power and employing 20 or more persons, is now being gradually extended by the state governments to smaller factories, hotels, restaurants, shops, cinemas, etc., employing 20 or more persons. It covers employees drawing wages not exceeding Rs. 1,000 per month.

The Act provides for medical care, cash allowance during sickness, maternity, employment injury and pension for dependents on the death of a worker because of injury. Full medical care, short of hospitalisation, is also being progressively made available to the members of the family of the insured persons.

As on 31 October 1979, there were 66 ESI hospitals and 31 annexes with 14,654 beds and 1,001 dispensaries. The number of employees covered was about 58.52 lakhs and the number of beneficiaries about 2.57 crores.

Employees' Provident Funds

Retirement benefits are available to the employees under the Employees' Provident Funds and Miscellaneous Provisions Act, 1952. On 31 March 1979, it covered 156 industries all over India except Jammu and Kashmir[1]. The Act does not apply to establishments registered under the Co-operative Societies Act 1912, and employing less than 50 persons and working without the aid of power.

The employers contribute 6¼ per cent of the basic wage and dearness allowance, including the cash value of food concessions and retaining allowance payable to the employees. The employees make a matching contribution. The government have enhanced the rate of contribution to 8 per cent in the case of 94 industries employing 50 or more persons.

At the end of March 1979, the subscribers numbered 97.95 lakhs. The receipts in provident funds, including interests earned, totalled Rs 5,778.58 crores while the amount refunded was Rs 2,620.15 crores.

Employees' Deposit-linked

Another important social security measure, the Employees' Deposit-Linked Insurance Scheme 1976, was introduced for the members of the Employees Provident Fund and the exempted Provident Funds with effect from 1 August 1976. On the death of a member, the person entitled to receive the provident fund accumulations will be paid an additional amount, equal to the average balance in the provident fund account of the deceased during the preceding three years, if such average balance was not below Rs 1,000 during the said period. The maximum amount of benefit payable under the Scheme is Rs 10,000 and the employee does not have to make any contribution for it

As on 31 March 1979, 6,743 claims were settled and a sum of Rs 4.26 crores paid to the claimants.

Gratuity Scheme

Under the Payment of Gratuity Act 1972, employees in factories, mines, oil-fields, plantations, ports, railways, motor transport undertakings, companies, shops and other establishments are entitled to gratuity. This is payable at the rate of 15 days' wages for each completed year of service, subject to a maximum of 20 months' wages. However, in the case of seasonal establishments, the employer shall pay the gratuity at the rate of 7 days' wages for each season. The Act does not affect the right of an employee to receive better

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

terms of gratuity under any award or agreement or contract with the employer.

Death Relief

A Death Relief Fund was set up in January 1964 to ensure a minimum of Rs 500 as financial help to the nominees or heirs of deceased members of unexempted establishments. The limit was raised to Rs 750 on 1 August 1969. The benefit has been extended to cover nominees or heirs of such persons whose pay does not exceed Rs 500 per month at the time of death.

Family Pension

To provide long-term financial security to the families of industrial employees in the event of their premature death, the Coal Mines Family Pension Scheme 1971, and the Employees' Family Pension Scheme 1971 were introduced from 1 March 1971. The Schemes are financed by diverting a portion of the employers' and employees' contribution to the Employees' Provident Funds with an additional contribution by the central government. As on 30 September 1979 47.77 lakh members were covered under the Employees' Family Pension Scheme.

Salesman Act

The Sales Promotion Employees (Condition of Service) Act, 1976 gives benefits under various labour laws to persons engaged in sales promotion activities. Besides regulating their service conditions, the Act extends the benefits of labour laws relating to security of service, minimum wages, maternity benefits, payment of bonus, gratuity and compensation, provisions for leave, issuing of appointment letters, etc. The Act which came into force from 6 March 1976, is at present applicable to employees engaged in the pharmaceutical industry.

Coal Mines Provident Fund

Provident Funds in coal mines have been set up under the Coal Mines Provident Fund and Miscellaneous Provisions Act, 1948. Except a few excluded categories, all persons employed in or connected with a coal mine, either directly by employers or through contractors, have to become subscribers to the fund when they have put in 60 days' attendance (above-ground miners) and 48 days' attendance (underground miners) in a calendar quarter. They are compulsorily required to contribute 8 per cent of their emoluments, with a matching contribution by the employers. Subscribers can make a voluntary contribution up to 8 per cent in excess of their compulsory contribution. They can get non-recoverable advances for house-building, financing of life insurance policies, meeting the expenses in connection with the marriage of daughter, for post-matriculation education of children and for purchasing shares of consumers co-operative societies and co-operative credit societies.

As on 31 December, 1978 there were 6.78 lakh subscribers to the provident funds in 1,001 coal mines and ancillary organisations.

Working Journalists Act

The Working Journalists and other Newspaper Employees (Conditions of Service) and Miscellaneous Provisions Act, 1955 regulates the conditions of service of working journalists and other persons employed in newspaper establishments. By a specific provision of this Act, the provisions of the Industrial Disputes Act with certain modifications have been applied to working journalists.

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

Coal Mines Provident Fund Deposit-linked Insurance Scheme

Deposit-linked Insurance has been introduced from 1 August 1976 for the employees of the coal industry. Under the scheme a person entitled to receive provident fund dues on the death of an employee who was a member of the Coal Mines Provident Fund, is also entitled to get, in addition to the amount of provident fund, an amount equal to the average of balance in the account of the deceased during the preceding three years (provided that such balance is not less than Rs 1,000), subject to a maximum of Rs. 10,000. No contribution is to be paid by the employee. The expenditure on the scheme and on its administration is to be contributed by the employers and the Central Government in the ratio of 2 : 1. As on 31 December 1978, 117 claims were settled and Rs 7.27 lakhs paid to the claimants.

Coal Mines (Attendance) Bonus

To encourage regular attendance by coal mine workers, a bonus scheme was framed under the Coal Mines Provident Fund and Miscellaneous Provisions Act, 1948. To begin with, those who had put in specified days of attendance were paid quarterly bonus at ten per cent of the basic earnings. From January 1973, they are paid bonus for the period for which they actually attend the mines.

As on 31 December 1978, the scheme covered 623 collieries all over India, except those in Jammu and Kashmir.

Workmen's Compensation

The Workmen's Compensation Act, 1923, requires the employers to compensate the workers against occupational diseases and injuries arising out of and in the course of employment. The Act has prescribed separate scales of compensation for death, permanent total disablement, permanent partial disablement and temporary disablement. It now covers workers employed in certain specified hazardous occupations and drawing wages not exceeding Rs 1,000 per month.

Maternity Benefits

The Maternity Benefit Act 1961, regulates the employment of women in certain establishments for certain periods before and after child birth and provides for maternity and other benefits. The Act applies to mines, factories, circus industry and plantations, including any such establishments belonging to government, except the employees who are covered under the Employees' State Insurance Act, 1948. It can be extended to other establishments by state governments. There is no wage limit for coverage under the Act.

LABOUR WELFARE

To enable workers to work in congenial surroundings, certain amenities such as canteens, rest shelters, creches, medical aid and education and recreational facilities have been provided in factories, mines and plantations covered by the Factories Act, 1948, the Mines Act, 1952, the Plantations Labour Act, 1951 and the Bidi and Cigar Workers (Conditions of Employment) Act, 1966. Contract labour is also provided similar amenities under the Contract Labour (Regulation and Abolition) Act, 1970. Factories employing 500 or more workers have to appoint welfare officers to look after the welfare of the workers. There are at present about 210 welfare officers in various central government departmental undertakings.

Welfare funds in central undertakings were created on a voluntary basis in 1966. The question of enlarging its scope is, however, under active consideration of the government.

Mines

For the welfare of mine workers, welfare funds have been set up in

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

coal, mica, iron ore, manganese ore, limestone and dolomite mines. The finance for the funds are raised through the levy of a cess on the coke and coal despatches from the collieries, an *ad valorem* cess as customs duty on mica exports, a cess as duty of customs on export of iron ore and manganese ore and duty of excise on internal consumption and a cess on the limestone and dolomite consumed by the iron ore and steel plants and cement and other factories. The welfare activities include housing, public health and sanitation, medical, educational and recreational facilities for workers and their dependents. It also covers provisions of monetary and other benefits under the Fatal and Serious Accident Benefit Schemes. A welfare fund for *Bidi* workers was set up in 1976.

Dock Labour

Various welfare measures are in operation for the dock workers in Bombay, Calcutta, Cochin, Kandla, Madras, Marmagao, New Mangalore, New Tuticorin, Paradip, Vishakhapatnam and other ports. These include housing, medical care, tuition fee concession for children and recreation and canteen facilities. Fair price shops and consumers' co-operative societies are also operating in some of the ports.

Plantation Labour

Under the Plantations Labour Act 1951, all plantations provide housing accommodation to their resident workers and their families and maintain hospitals or dispensaries for them. Some of the plantations also run elementary schools for the education of the labourers' children. Training in useful handicrafts, such as tailoring, knitting, weaving and basket-making and recreational facilities are provided in some of the tea estate centres with the help of the Tea Board.

Motor Transport Workers

The Motor Transport Workers' Act, 1961 provides for the welfare of motor transport workers and for the regulation of their working conditions. The various schemes in operation include canteens, rest rooms, uniform hours of work and leave. The Act is administered by the state governments which have framed rules for its enforcement. The second conference of Chief Inspectors appointed under the Motor Transport Workers Act, held in June 1978, had recommended a number of amendments to the Act so as to remove certain difficulties faced in the implementation of the various provisions of the Act. These are under consideration of the government.

Workers' Education

The Central Board for Workers' Education, set up in 1958, is a tripartite body, consisting of representatives of central and state governments, organisations of employers and workers and educationists. It is a registered society for implementation of workers' education schemes with the following objectives : (i) to equip all sections of workers, for their intelligent participation in socio-economic development of the nation; (ii) to promote among workers, a greater understanding of the problems of their socio-economic environment, their responsibilities towards family and their rights and obligations as citizens, as workers in industry and as members and officials of their trade unions; (iii) to develop leadership from among the rank and file of workers themselves; (iv) to create strong, united and more responsible trade unions through enlightened members and better trained officials; (v) to strengthen democratic processes and traditions in the trade union movement; and (vi) to enable trade unions themselves to take-over ultimately the functions of workers' education.

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

The scheme of workers' education is divided into three stages. Under the first stage, training is given to education officers who are full-time employees of the Board. In the second stage, workers sponsored by trade unions are trained for three months by the education officers. These workers are called worker-teachers. In the third stage, worker-teacher conducts classes for other workers at their places of employment.

Rural Workers' Education

In 1977, the activities of the Board were extended to the unorganised sector also. Under the programme, seven pilot projects were started in 1977-78 at selected regional centres. The experience of these projects was encouraging and the Board has since decided to extend the programme to all the regional workers' education centres on regular basis. The category of workers covered are: landless labourers, agricultural workers, rural artisans, forest and fisheries labour, marginal peasants and educated unemployed in rural areas.

Functional Adult Education

The Board has recently undertaken Functional Adult Literacy Programme among mines and plantation workers. On an experimental basis, every regional centre started one functional adults literacy class from 2 October 1978.

The Board has established 39 regional centres to cover important industrial centres. It also gives grants-in-aid to trade unions and institutions conducting workers education programmes.

As on 31 November 1979, the Board had trained 52,563 worker-teachers, 26,01,516 workers in unit-level classes, 10,16,049 workers in short-term programmes and 2,33,793 workers under the programmes conducted by the grantees.

WORKERS' SAFETY

National Safety Council

The National Safety Council was set up in March 1966. Its main function is to conduct seminars, organise film shows in factories and distribute posters on the subject of safety.

In January 1979, the Council's membership consisted of 926 corporate members, 130 individual members, 31 trade union members and 13 life members.

National Safety Awards

Various schemes for the grant of National Safety Awards to factories, covered by the Factories Act 1948, and ports have been instituted for good safety records. Each scheme consists of cash prizes and certificates of merit. Seventy two factories three stevedoring firms and three port authorities were given the awards for the year 1976 in 1978.

Safety in Mines

Under the Constitution, safety, health and welfare of workers employed in mines are the concern of the central government. The matter is regulated by the Mines Act 1952. The Act applies to mines of all types including mines of atomic minerals and oil fields—both on and off shore. There are at present about 564 coal mines and 5,000 non-coal mines working in the country and coming under the purview of the Mines Act. Nearly eight lakh workers are employed in these mines.

Over the years, there has been a perceptible downward trend in the incidence of accidents. Death rate, per 1,000 persons employed, which used to be of the order of 1.82 in 1923 and 1.00 in 1952 in coal mines, is currently of the order of 0.37. Likewise, the rate in non-

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

coal mines has come down from 1.05 in 1923 and 0.47 in 1952 to a range of 0.25 to 0.30. Corresponding improvements in the incidence of serious accidents had also been achieved. Serious injury rates which were of the order of 7.50 for coal mines and 5.60 for non-coal mines in 1947-52 came down to 3.95 and 3.10 respectively by 1978.

Shram Vir Awards

Shram Vir Awards were instituted in 1965 for workers in factories, mines, plantations and docks. They are given in recognition of meritorious performance—such as suggestions leading to higher productivity or economy or greater efficiency. Thirty five awards were distributed in 1978 to 50 winners under various categories for the Award Year 1976.

AGRICULTURAL LABOUR

According to the 1971 Census, agricultural labourers in India numbered 4.75 crores representing 26.33 per cent of the total work force in the country. The corresponding figures in 1961 were : 3.15 crores and 16.71 per cent. This increase in the number of agricultural labour has been accompanied by a decrease in the number of cultivators from 9.95 crores in 1961 to 7.82 crores in 1971.

The average annual income of an agricultural labour household in India during 1950-51 was Rs 447.00; during 1956-57 it fell to Rs 437.47 but increased to Rs 660.19 during 1963-64 and again increased significantly to Rs 1,671 during 1974-75. The 25th round of the National Sample Survey has revealed that during the period July 1970 to June 1971, the average earnings as wages per man-day for the country as a whole were Rs 2.03 for the landless worker and Rs 1.90 for the small cultivator.

The Minimum Wages Act, 1948 and the Trade Unions Act, 1926 are applicable to agricultural labour. Agricultural farms run on commercial lines are also covered by the Industrial Disputes Act, 1947. The Employees' Provident Fund and Miscellaneous Provisions Act, 1952 is applicable to agricultural labour engaged in specified plantations. Workers employed in farming by tractor or other mechanical power or by electricity are already covered by the Workmen's Compensation Act, 1923.

The government convened a conference on rural unorganised labour on 25 January 1978 to consider the problems facing agricultural workers. A Central Standing Committee has since been constituted to advise the government on measures to ameliorate the socio-economic conditions of unorganised rural labour.

The Government of India has ratified the ILO Convention No. 141. It requires the ratifying countries to facilitate the establishment and growth, on voluntary basis, of strong and independent organisation of rural workers.

Rural Labour Enquiry

The rural labour enquiry was conducted between 1963–65 through the National Sample Survey. Data were collected on consumption expenditure, income, employment, unemployment, earnings and indebtedness of rural labour households (including agricultural labour households). The field work of the second rural labour enquiry was completed in June 1975. The data are under scrutiny. Meanwhile the Labour Bureau has brought out the summary report of the Rural Labour Enquiry 1974-75 which contains provisional results on all-India basis in respect of selected economic indicators.

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

EMPLOYMENT

Employment in the organised sector, *i.e.*, in all the public sector concerns and non-agricultural establishments employing ten or more persons, increased from 214.8 lakhs in March 1978 to 221.5 lakhs (Provisional) in March 1979, an increase of 3.1 per cent as compared to 3.5 per cent during the previous year. The increases in public and private sectors employment during 1978-79 were 3.7 per cent and 1.9 per cent respectively as compared to 4.4 per cent and 2.5 per cent in the preceding year.

The comprehensive labour force surveys conducted by the National Sample Survey Organisation, once in five years since 1972-73, provide estimates of unemployment in the country. However, accurate estimates of employment and unemployment in the country are not available. The most recent estimates are based on the 'key results' available from the survey conducted between July 1977 and June 1978 (32 round of the National Sample Survey). According to these results "weekly status" unemployment the average number of persons aged betwen 15 and 59 who did not have even an hour's work during the survey week and who were looking for or were available for work, was one crore during 1977-78. The daily status unemployment or the average daily unemployment was 1.68 crores person-years during the same period.

National Employment Service

The National Employment Service (NES), started in 1945, consists of a network of employment exchanges manned by trained personnel. The exchanges assist all employment seekers, specially the physically handicapped, ex-servicemen, scheduled castes and scheduled tribes, university alumni and professional and executive personnel. The NES also carries out other functions, such as vocational guidance and employment counselling for better utilization of human resources, the collection and dissemination of employment market information and conducting studies in the field of employment and occupational research, which provide the basic data for framing policy on some aspects of manpower.

Under the Employment Exchanges (Compulsory Notification of Vacancies) Act, 1959, it is obligatory for all establishments in the public sector and non-agricultural establishments in the private sector employing 25 or more workers to notify their vacancies (with certain exemptions) to the employment exchange and supply periodic information.

The number of employment exchanges in the country on 31 December 1977 was 546 including 69 university employment information and guidance bureaux. Table 22.5 gives figures relating to the activities of the exchanges. The subject Rural Employment and Unemployment has now been transferred from the Ministry of Labour.

Administration

The day-to-day administrative control over the employment exchanges was transferred to the state governments in November 1956. From April 1969, the states were also made financially responsible for the manpower and employment schemes. The role of the central government is limited to policy-making, co-ordination of procedure and standards, and the development of various programmes on an all-India basis.

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

TABLE 22.5
ACTIVITIES OF EMPLOYMENT EXCHANGES

Year	No. of exchanges[1]	No. of registrations	No. of applicants placed in employment	No. of applicants on the live register	Monthly average no. of employers using the exchanges	No. of vacancies notified
1956	143	16,69,985	1,89,855	7,58,503	5,346	2,96,618
1961	325	32,30,314	4,04,707	18,32,703	10,397	7,08,379
1966	396	38,71,162	5,07,342	26,22,460	12,908	8,52,467
1971	437	51,29,857	5,06,973	50,99,919	12,910	8,13,603
1972	453	58,26,916	5,07,111	68,96,238	13,154	8,58,812
1973	465	61,45,445	5,18,834	82,17,649	13,366	8,71,398
1974	481	51,76,274	3,96,898	84,32,869	12,175	6,72,537
1975	504	54,43,493	4,04,056	93,26,289	11,124	6,81,614
1976	517	56,19,397	4,96,781	97,84,332	13,277	8,45,575
1977	528	53,24,607	4,61,610	1,09,24,043	12,392	8,03,379
1978	535	61,43,834	4,60,641	1,26,77,821	12,967	8,30,728
1979	546	61,27,156	4,66,294	1,43,33,923	13,618	8,78,689

[1]Includes 15 professional and executive employment offices and excludes 69 university employment information and guidance bureaux.

Vocational Guidance

Vocational guidance and employment counselling services are provided to the youth (applicants without any work experience) and adults (with specific work experience). During 1979, vocational guidance units were functioning at 264 employment exchanges, apart from 69 university employment information and guidance bureaux.

In order to divert educated youth to channels of gainful employment, vocational guidance and career advising programme of the Directorate-General of Employment and Training (DGE&T) have been expanded and streamlined. A career study centre at the Central Institute for Research and Training (CIRTES) provides career literature for the occupational orientation of the youth and other guidance seekers. CIRTES also imparts training in employment services, procedures, vocational guidance and seminars for the personnel of national employment service. It is also engaged in conducting research studies in several areas and fields of employment service.

Exchanges for Physically Handicapped

There are 18 special exchanges for the physically handicapped. They are functioning at Ahmedabad, Bangalore, Bhubaneshwar, Bombay, Calcutta, Chandigarh (one for Punjab and another for Haryana)), Delhi, Hyderabad, Jabalpur, Jaipur, Kanpur, Madras, Patna, Simla, Gauhati, Trivandrum and Agartala. Till December 1979, 81,821 applicants had registered themselves with them, out of whom 20,061 persons had been placed in employment.

Ten vocational rehabilitation centres for the physically handicapped are functioning at Ahmedabad, Bombay, Calcutta, Delhi, Hyderabad, Jabalpur, Kanpur, Ludhiana, Madras and Trivandrum. Till October 1979, they admitted 29,095 persons, out of whom 3,651 were rehabilitated. In February 1980 a new centre has been started in Bangalore.

Training Programmes

In an endeavour to build up the career of young persons in their adolescence, the DGE&T has evolved various training programmes.

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

These are formulated within the national framework as far as possible and also in collaboration with foreign countries.

Studies / Surveys

During 1977-78, the DGE&T completed the survey on the employment status of apprentices trained under the Apprentices Act, 1961. Besides this, two important surveys viz., (1) study on the margin of error in the employment data collected under the EMI Programme and (ii) study on the characteristics of the hard core of job seekers on the live register of employment exchanges, are under progress.

Craftsmen's Training

Industrial training institutes have been set up all over the country to impart skills in 32 engineering and 21 non-engineering trades to young-men and women in the age group 15-25. At present 466 such introduced aptitudes tests which are applied for the selection of craftsmen. Training is also conducted in 274 private institutes affiliated to the National Council for Training in Vocational Trades.

To promote the efficiency of craftsmen-trainees, the DGE&T has introduced aptitude tests which are applied for the selection of craftsmen-trainees in engineering trades. During 1977, aptitude tests were conducted in 19 engineering trades for the selection of trainees in industrial training institutes including model training institutes in states. The aptitude testing programme has also been extended to industries in different regions for selecting suitable candidates as apprentices under the Apprentices Act, 1961.

The duration of the courses varies from one to two years for engineering trades, but is one year for all non-engineering trades. Successful candidates are awarded National Trade Certificates.

Besides 53 trades, the state governments and union territories have introduced training in additional trades to meet the requirements of the new industries established in their areas.

The educational qualification for admission in the industrial training institutes in most of the trades under the Craftsmen's Training Scheme is 8th standard or two classes below the matriculation or its equivalent. For some trades, such as electronics, radio and TV, electricians, draftsmen (mechanical/civil) and surveyors, the minimum qualification is matriculation or its equivalent with mathematics and science.

The industrial training institutes have also started a scheme to train other ranks in the Indian Army to facilitate their rehabilitation in civil life on their release or retirement from service.

Craft Instructors Training

Six central training institutes at Bombay, Calcutta, Hyderabad, Kanpur, Ludhiana and Madras train craft instructors required by the Industrial Training Institutes and the Apprenticeship Training Establishments. The six institutes, with an admission capacity of 1,136 impart training in a number of trades. Facilities for the training of instructors have also been provided in chemical group of trades at the Bombay institute, and in hotel-catering at the Hyderabad institute. Facilities for training in printing, weaving and farm mechanics trades are also being provided at institutes in Kanpur, Bombay and Ludhiana respectively. A model training institute is attached to each of the Central Training Institute, which provides practical training for instructors.

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

Advanced Vocational Training System

A project called 'advanced vocational training system' has been launched for training of highly skilled workers and technicians in a variety of advanced and sophisticated skills not available from other vocational training programmes. The system has been introduced in the Central Training Institutes for Instructors located at Bombay, Calcutta, Hyderabad, Kanpur and Ludhiana, Advanced Training Institute, Madras and 16 selected Industrial Training Institutes located at Ambattur, Bangalore, Vadodara, Dhanbad, Durgapur, Faridabad, Gauhati, Jabalpur, Jammu, Jodhpur, Kalamessary, Meerut, Patiala, Pune, Rai-Bareily and Visakhapatnam. These institutes are being modernised and developed into Model Training Institutes to enable them to conduct various advanced courses under the scheme. The Advanced Training Institute at Madras is functioning as the Apex and the five Central Training Institutes where the system has been introduced serve as Regional Institutes for the country as a whole. So far about 3,000 highly skilled workers have been trained under the Scheme.

An advanced training institute for electronics and process instrumentation has been established at Hyderabad to train highly skilled technicians in fields such as domestic/industrial/medical/electronics and process instrumentation. The Institute has conducted 61 short-term/long-term courses in which 731 persons have been trained till December, 1979.

Foremen's Training

An institute to train foremen was established in Bangalore in 1971. It trains existing and potential shop foremen and supervisors in theoretical and managerial skills and workers from industry in advanced technical skills. The facilities generated at this institute are being made available through the Central Training Institute, Bombay, also. A part-time evening course has also been introduced on the modular system at the Foremen Training Institute, Bangalore. It conducted 198 courses and trained 3,198 persons up to December 1979.

Apprenticeship Training Scheme

The Apprentices Act, 1961 makes it obligatory for employers in specified industries to engage apprentices. The training consists of basic training followed by on-the-job or shop-floor training in accordance with standards prescribed by the government in consultation with the Central Apprenticeship Council. So far 217 industries and 131 trades have been brought under the Act. The Apprentices (Amendment) Act, 1973 provides for reservation of seats for scheduled caste and scheduled tribe candidates as well as for improving the employment potential of engineering graduates and diploma holders.

About 16,791 establishments are implementing the Act. About 1.22 lakhs trade apprentices undergo training in various trades. Fifty seven subject fields in engineering/technology have been designated and about 11,396 graduate and diploma holders apprentices undergo training in the various subject fields.

Part-time Training to Industrial Workers

Along with the expansion of facilities for the training of craftsmen in institutes and through the apprenticeship programme, even classes have been organised to improve the standards of industrial workers who may enter the industry without any systematic training.

Industrial workers, irrespective of their age, but possessing two years' workshop experience in a particular trade and sponsored by their employers are eligible for admission to this course. The period

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

of training is two years and the fee charged is Rs 2 per month. Courses are conducted in six Central Training Institutes and 32 Industrial Training Institutes.

Vocational Training Research

A Central Staff Training and Research Institute was set up at Calcutta in 1970 for developing indigenous training techniques. The Institute conducts training programmes for officers and staff of the central and state governments as well as from industry who control, regulate and direct training programmes. It also carries out research in trades and training techniques, prepares training aids, and advises industry on industrial training methods. It conducted 178 staff training courses and trained 1,657 officers up to December 1979.

Vocational Training Programme for Women

The Central Training Institute for Women at New Delhi has been upgraded into a National Vocational Training Institute for Women. The Institute provides instructor training, basic training and advanced training in selected trades particularly suitable for women. Two Regional Vocational Training Institutes for Women have also been set up at Bombay and Bangalore. About 445 women have been trained in basic, advanced, institutional and *ad hoc* courses and 290 were on rolls as on 5 February, 1980.

COMMITTEE ON AUTOMATION

A committee on automation was set up by the central government in 1969 with Shri R. Venkataraman as chairman to review the effect of automation in enterprises in which it has already been introduced. It was also to suggest criteria for determining areas and fields in which automation, including computers, may be permitted and to recommend safeguards for avoiding or minimising any harmful social effect of automation. Its report was presented to the government in 1972. Consequent on the resignation of Shri R. Venkataraman, government appointed Professor V. M. Dandekar as chairman of the committee. The committee in its report recommended establishment of computer service centres for users and a procedure for introduction of computers in industrial establishments.

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

23 HOUSING

According to the 1971 census, some 5.79 lakh human settlements accommodate India's population. Nearly 80 per cent live in 5.76 lakh villages. The remaining 20 per cent live in 3,119 urban settlements.

The problem of housing in India is a complex one, requiring finances on a large scale, and is dependent for its solution on the concerted efforts of individuals, co-operatives and central and state governments, to be planned and executed over a number of years. There is an acute shortage of housing in urban and rural areas and much of the available accommodation is qualitatively sub-standard.

With a growing population and the steady shift of population from the rural to urban areas, the problem has become more difficult both in qualitative and quantitative terms.

According to the 28 round of the national sample survey for 1973-74, nearly two-thirds of urban house-holds live in pucca houses. In rural areas, however, kutcha and semi-pucca houses are the rule. Most of them, however, would require extensive repairs or replacement over a 20-year period. In urban areas, a very large number of house-holds have limited access to basic needs like water and sanitation and only a small minority of house-holds have modern facilities for their exclusive use. In rural areas, where the need for such modern facilities may be less urgent, practically all house-holds are dependent on communal sources for water and on nature for sanitation.

According to the draft Five Year Plan, increase in urban and rural population during 1978-83 period would be 2.11 crores and 4.19 crores respectively. On the basis of the average house-hold size reported in the 28 round of national sample survey, the requirement of dwelling units would come to 45 lakhs units in urban areas and 81 lakh units in rural areas.

In order to meet the requirement of additional house-holds due to population increase, replacement and repair of old units and to wipe out the existing backlog, a massive housing construction programme has to be undertaken. To achieve this goal, the investment has to be increased heavily as compared to the Fifth Five Year Plan investment.

To encourage house building activity, the government is taking measures to remove and eliminate the obstacles and disincentives which deter the growth of private building activities. Action has also been taken to preserve the existing housing stock as long as possible in a satisfactory condition.

Although it is the endeavour of the government to solve the housing problem as expeditiously as possible within the available resources, it is not possible to provide a house to every family at public cost, involving expenditure of several hundreds of crores of rupees, in view of the competing claims of other priority problems facing the country.

To improve the housing condition, specially for the lower income group, the Government of India has introduced from 1952 several social housing schemes providing subsidised housing on a limited scale for the economically weaker sections of the community like slum-dwellers and industrial and plantation workers. It provides financial assistance to state governments for undertaking composite projects of land acquisition and house construction to cater to the needs of low and middle income groups.

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

HOUSING FINANCE

Most of the funds for housing are provided by the central and state governments. The Life Insurance and the General Insurance Corporations supplement these funds. Funds are also provided by the Housing and Urban Development Corporation which advances loans to state governments, State Housing Boards and Housing and Urban Development Authorities for the execution of their housing projects. Housing finance is also being provided by scheduled commercial banks.

Investment

During the period starting from the First Five Year Plan up to the end of the Fourth Five Year Plan, a total of Rs 469.99 crores was spent in the public sector on various social housing schemes. A provision of Rs 1,183 (revised) crores has been made in the Sixth Plan (1978-83) as compared to Rs 600.92 crores in the Fifth Plan. The amount includes Rs 425 crores exclusively for rural housing.

During 1978-79, the Housing and Urban Development Corporation sanctioned 20 per cent more projects than the previous year which itself was a record since its inception in 1970. The emphasis continues to be on providing shelter to weaker and low income groups in the society.

RESEARCH

National Buildings Organisation

Research in building techniques and new methods of house construction is carried out by the National Buildings Organisation (NBO) which was set up by the Government of India in 1954 as an advisory and co-ordinating body for all technical matters concerning building and housing. The NBO also sponsors research work on various aspects of building construction, improvement of utilization of building materials and on the sociological and economic aspects of housing. Nine rural housing wings at Vallabh Vidyanagar (Anand), Bangalore, Calcutta, Chandigarh, New Delhi, Srinagar Trivandrum, Varanasi, and Jodhpur are functioning under NBO for research, training and extension work in rural housing and village planning.

The Organisation, which is the national agency for collection of building and housing statistics, also functions as the United Nations Regional Housing Centre for ESCAP region.

The NBO has set up a permanent building exhibition in Nirman Bhavan, New Delhi, where building materials and products available in the market, and also new and improved materials evolved by research organisations are on display.

The NBO has made an important contribution for reducing cost of construction by promoting the application of results of research in practice through its experimental housing schemes. As many as 50 new materials and construction techniques evolved by research laboratories have been incorporated in 36 experimental projects, costing over Rs 2.39 crores. These projects were sponsored by various central and state construction departments, housing boards and other agencies in the country. The NBO has evolved minimum specifications for housing and building, norms for consumption of materials and space norms for repetitive types of buildings such as schools, health centres etc. It has also done useful work for facilitating introduction of standardisation and modular coordination in the building industry which would go a long way in rationalising housing and building.

The organisation has prepared a typical design of a house for the landless workers and a sample house has been put up at village Sultanpur, New Delhi, to demonstrate the use of water-proof and plaster and

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

fire retarding treatment of thatch. The NBO has also prepared all India standard schedule of rates and specifications for unifying building practices in the country.

Central Building Research Institute

The Central Building Research Institute, which till recently was under the control of the Ministry of Works and Housing has been registered as a society under the Societies Registration Act.

The Institute undertakes research in the field of building science and technology comprising : building materials; building physics; soil mechanics and foundation engineering; building process; plant and productivity; design and functional efficiency of building; architecture and physical planning; fire research; and building economics and management.

The object of the research programme of the institute is to help engineers, architects, manufacturers of building materials, builders and others engaged in the building industry to achieve economy and efficiency. Developmental testing, technical information to building industry and other organisations are also the functions of the Institute.

PRODUCTION OF MATERIALS

The Hindustan Prefab Ltd. (earlier known as Hindustan Housing Factory Ltd.), a Government of India company, apart from manufacturing pre-fabricated houses, specialises in producing several other items, such as pre-fabricated reinforced cement concrete components, pre-stressed cement concrete transmission poles, foam concrete panels and partition and insulation blocks. It undertakes wooden joinery work and has standardised certain pre-cast building components for use by individual house-builders and construction agencies.

The pre-fabricated components for industrial structures by the Factory have not only effected saving in steel and resulted in quicker construction but also brought down the construction cost to some extent.

CONSTRUCTION AGENCIES

National Buildings Construction Corporation

The National Buildings Construction Corporation, New Delhi, a public sector undertaking, undertakes specialised construction works both inside and outside the country. The Corporation is also engaged in export promotion efforts and has been awarded the work of construction of an airport at New Ghat, Libya, valuing about Rs 36 crores. The Corporation is also executing a contract worth about Rs 90.00 crores for construction of a hospital complex and housing units in Libya, and another contract for construction of sewerage works in Iraq valuing about Rs 4 crores. The Corporation has so far undertaken contracts worth Rs 166 crores in foreign countries. It also owns a mechanised brick plant in Delhi.

Central Public Works Department

The Central Public Works Department (CPWD) designs, constructs, maintains and repairs all works and buildings of the central government, except those belonging to the railways, communications, atomic energy, defence services and All India Radio. It also maintains national highways in Delhi and exercises technical control over the public works departments of union territories. Public undertakings which do not have their own civil engineering organisations, have to entrust their construction works to CPWD or public sector construction and consultancy organisations. The CPWD also works on behalf of semi-government organisations on a deposit basis.

The Central Public Works Department has developed considerable expertise in the architectural landscaping, structural and horticultural

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

fields, as well as in civil construction and the installation of services. The Department has a well-developed architectural wing, a central designs organisation for complex structural design work, field units for the execution of projects, and an electrical and mechanical wing to handle a variety of service installations.

STATE SECTOR SCHEMES

The Integrated Subsidised Housing scheme, which came into operation in 1952, is intended for low-paid industrial workers and other economically weaker sections of the community. The income limit for eligibility for initial allotment of houses built under the scheme is Rs 500 per month, subject to payment of some additional charges by allottees in the income group between Rs 351 and Rs 500 per month. Up to 31 December 1979, 1,86,446 houses had been constructed.

The Low Income Group Housing scheme started in 1954, enables persons (or their cooperatives) whose income does not exceed Rs 7,200 per annum to get loans for constructing houses. The amount of the loan is restricted to 80 per cent of the cost of construction of a house (including the cost of developed land), subject to a maximum of Rs 14,500. Up to 31 December 1979, construction of 3,35,762 houses had been completed.

The Middle Income Group Housing scheme, launched in 1959, is generally financed from the funds made available by the Life Insurance Corporation as loans to state governments. In the union territories, the funds are provided by the central government. Loans are available under the scheme to individuals whose income is in the range of Rs 7,201 to Rs 18,000 per annum for the construction of houses. The loans are restricted to 80 per cent of the cost of a house, subject to a maximum of Rs 27,500. Loans are also given to eligible persons for the purchase of ready built houses. Up to 31 December 1979, 42,714 houses had been constructed.

The Village Housing Project scheme provides for the grant of loans for construction of houses by villagers to the extent of 80 per cent of the cost of construction, subject to a maximum of Rs 5,000 and also for providing streets and drains to improve the environmental hygiene of the villages. Up to 31 December 1979, about 68,425 houses had been constructed.

The Rental Housing scheme for state government employees was introduced in 1959. Under the scheme, state governments construct residential accommodation and rent it out to their employees. Up to 31 December 1979, 34,125 houses had been completed.

The Land Acquisition and Development scheme, started in 1959, enables state governments and administrations in the union territories to acquire and develop land in urban areas so that developed plots can be made available at reasonable prices to intending house builders, particularly those in the lower income groups. Its object is to stabilise land prices, nationalise urban development and promote self-contained composite housing colonies. Up to 31 December 1979 about 13,640 hectares of land had been acquired and 7,160 hectares developed by various state governments.

CENTRAL SECTOR SCHEMES

The subsidised housing scheme for plantation workers is in operation since 1956. Under the scheme, the central government pays 50 per cent loan and 37½ per cent grant for construction of accommodation for allotment free of rent to plantation labour, which is con-

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

centrated in six states namely, Assam, Karnataka, Kerala, Tamil Nadu, Tripura and West Bengal. Cooperatives of plantation workers receive financial assistance up to 90 per cent of the approved cost of a project : 65 per cent as loan and 25 per cent as subsidy.

The central government also has a scheme under which it grants loans to its employees, including those governed by the Payment of Wages Act, on the basis of a welfare scheme sanctioned in 1956 for building houses and for the purchase of ready built houses. From 1 April 1978., loan sanctioning powers were delegated to the ministries/departments. The budget and allotment of funds are controlled by the Works and Housing Ministry. A provision of Rs 31.00 crores was made for 1979-80.

House Sites for Landless Workers

The scheme for provision of house sites to landless workers in rural areas is a part of the National Minimum Needs Programme. It had been transferred from the central sector to the state sector with effect from the date of commencement of the Fifth Plan, *i.e.* 1 April 1974.

Up to 31 December 1979 about 77.32 lakh families have been allotted house-sites in different states and union territories. The governments of Manipur, Meghalaya, Nagaland, Arunachal Pradesh, Lakshadweep and Mizoram have reported that they do not have this problem in rural areas.

URBAN DEVELOPMENT

In India, the concept of planned urban development is of recent origin. Although development schemes for urban areas were drawn up and implemented from the beginning of the Five Year Plans, the need for planned urban development was recognised only in the Third Plan when an allocation of Rs 3 crores was made by the central government for giving grants to state governments for this purpose. Till March 1969, the scheme for urban development continued as a centrally-sponsored programme. From 1 April 1969, the preparation of Master and Regional plans was transferred to state governments with the central government acting only in an advisory capacity. In the Fourth Plan, an allocation of Rs 73.47 crores was made for the urban development programme. An outlay of Rs 90 crores was made in the Fifth Plan for the Housing and Urban Development Corporation under the central sector. The draft plan 1978-79 had a provision of Rs 752.00 crores for urban development.

TOWN AND COUNTRY PLANNING ORGANISATION

The Town and Country Planning Organisation is a technical advisory body on all matters pertaining to urban and regional development. It provides technical guidance and assistance to all state governments and union territories. It also undertakes project work for development on consultancy basis from public undertakings and local bodies.

Socialisation of Urban Land

The Urban Land (Ceiling and Regulation) Act came into force on 17 February 1976.

It seeks to curb speculation and to implement the policy of socialisation of urban land. The Act puts a ceiling on the ownership of urban vacant land on a graded basis. It also empowers the concerned state governments to acquire vacant land in excess of the ceiling limits, prescribes compensation payable therefore, grants exemption and restricts the plinth area of future construction of dwelling units.

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

While the responsibility for administering the Act vests in the state government, with a view to facilitating expeditious implementation of the objectives of the Act, the Government of India had set up a central coordination committee, with the representatives of the states and union territories serving on it. This committee has recently been replaced by four regional committees. These committees review the progress in the implementation of the Act and suggest measures for resolving the difficulties, if any, that may be encountered by the states. A series of guidelines clarifying the intent and purport of the provisions of the Act have been issued to the state governments which in turn have laid down further guidelines.

As a result of the application of the Act, excess of vacant land, has vested in the State in Gujarat, Karnataka, Maharashtra and Uttar Pradesh to the extent of 1,110 hectares. Land held for industrial purposes as also land held in excess of the ceiling limit is exempted on grounds of undue hardship and in public interest. The notices/ applications for permission to transfer vacant land/urban property are being processed by the competent authorities expeditiously.

Some states have taken complementary measures. The West Bengal Government has enacted the West Bengal Urban Land Taxation Act, 1976.

National Capital Region

Among the important programmes on which work is in progress is the National Capital Region Plan around Delhi which covers an area of about 30,000 sq km in the union territory of Delhi and parts of Haryana, Rajasthan and Uttar Pradesh. The plan envisages integrated regional development programmes for drinking water supply, drainage, power supply, community facilities and services over the whole region. For 1974-75, a sum of Rs 36 lakhs was provided for the scheme of development of the National Capital Region. Out of this, Rs 34 lakhs were given as loan assistance to the constituent states of National Capital Region, namely, Haryana, Rajasthan and Uttar Pradesh for supplementing the investments made by them for development of ring towns of Gurgaon, Alwar and Meerut. In 1975-76 and 1976-77, further loans of Rs 1.34 crores and Rs 1.75 crores respectively were released for these towns. The release in 1976-77 included Rs 100 lakhs for Panipat. During 1978-79, an amount of Rs 1.00 crore was released for the development of Meerut, Gurgaon, Alwar and Hapur. This included Rs 15 lakhs each under the new scheme for intensive development programme of Alwar and Hapur as identified by HUDCO up to the end of 1978-79. Up to the end of 1978-79, a sum of Rs 16.18 crores had been sanctioned by the Government of India as loan assistance to the governments of Uttar Pradesh, Haryana and Rajasthan.

A network of mass rapid transit system (MRTS) for Delhi urban areas has been accepted by the Planning Commission. The Metropolitan Transport Project (Railways) is conducting techno-economic and engineering feasibility studies of MRTS network in close cooperation with the Town and Country Planning Organisation and the Delhi Development Authority.

The Government of India is, however, now of the view that the concept of the National Capital Region, in itself laudable, cannot be implemented effectively unless the urban development of the entire region is undertaken by a single administrative agency with statutory powers. The idea of development of a few smaller towns has since

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

been conceived with a view to reducing population pressure on bigger cities. This exercise is being undertaken with a view to reducing the pressure of population in the capital. Details are being worked out.

Development of Metropolitan Cities

For development of metropolitan cities and areas of national importance, a new scheme was included in the Fifth Plan. Under the scheme, the central government would supplement the efforts of state governments in this direction. An outlay of Rs 149.51 crores was provided for the Fifth Plan period. For 1974-75, a sum of Rs 14.84 crores was provided under the scheme. Out of this, Rs 14.51 crores were given as loan assistance to the governments of Andhra Pradesh, Maharashtra, Tamil Nadu and West Bengal for supplementing the investments made by them for the integrated development of their capital towns and to the governments of Madhya Pradesh and Punjab for supplementing the investments made by them for the integrated development of their cities of Bhopal and Indore and Ludhiana. The loan assistance given in 1975-76 was Rs 18.89 crores to 13 cities. In 1976-77, a sum of Rs 29.25 crores was released to 17 cities. In 1978-79, a sum of Rs 39.19 crores was released for 31 cities.

This scheme has been discontinued from 1 April 1979 and a new central sector scheme called Integrated Development of Small and Medium Towns has been introduced for development of about 200 towns with population below one lakh. A provision of Rs 80 crores was made during 1979-80 for the scheme.

In Delhi, an Urbn Art Commission has been set up for preserving, developing and maintaining the aesthetic quality of urban and environmental design within Delhi.

Slum Clearance and Improvement Scheme

The Slum clearance and Improvement scheme was introduced in 1956 as a centrally-sponsored programme under which financial assistance was given to states and union territories for the clearance and improvement of slum areas and rehousing of slum dwellers whose income does not exceed Rs 350 per month. From 1 April 1969 the scheme was transferred to states.

Environmental Improvement of Slums

To bring about improvement of environmental conditions in slum areas, a programme known as the Central Scheme for Environmental Improvement in Slum Areas was launched in 1972 in ten cities, namely, Ahmedabad, Bombay, Bangalore, Delhi, Hyderabad, Kanpur, Lucknow, Madras, Nagpur and Pune. During 1973-74, ten more cities, *viz.*, Calcutta, Cochin, Cuttack, Gauhati, Indore, Jaipur, Ludhiana, Patna, Rohtak and Srinagar were also covered under the scheme. The concerned state governments were given full financial assistance for the provision of drinking water, sewerage and drains, community baths and latrines, street lighting and widening and paving of existing lanes in slum areas. Till 31 March 1974, 854 projects worth over Rs 24.60 crores had been sanctioned. A sum of over Rs 20.23 crores was released to the states in respect of these projects. Out of this an expenditure of over Rs 14.21 crores had been incurred by the end of March 1974.

The scheme was transferred from the central sector to the state sector from 1 April 1974 to be implemented by state governments as one of the Minimum Needs Programme. The operation of this scheme was extended to cover cities with population of three lakhs and above,

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

or one city in each state where the scheme has not so far been extended. Now, it covers all urban areas irrespective of their size of population.

Jhuggi and Jhonpri Removal Scheme

The Jhuggi and Jhonpri Removal scheme is designed to provide alternative accommodation to unauthorised occupants of government and public lands in Delhi and New Delhi. About two lakh tenements and plots have been constructed/developed under the scheme so far.

Delhi Land Acquisition Scheme

A scheme known as the Large Scale Acquisition, Development and Disposal of Land is in force in Delhi. Under the scheme, land measuring about 15,948 hectares has been acquired so far. Of this, 12,303 hectares have been allotted to the Delhi Development Authority/Municipal Corporation of Delhi and about 3,642 hectares have been allotted to various cooperative house building societies, semi government organisation, etc.

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

24 JUSTICE AND THE LAW

The Constitution of the Republic of India guarantees, besides others, protection of life and liberty to the citizens and provides adequate safeguards against the arbitrary deprivation thereof by the State.

The adoption of a republican Constitution by India in 1950 did not disturb the continuity of the existing laws and the unified structure of the courts. Article 372 provides that notwithstanding the repeal of the Government of India Act, 1935 and the Indian Independence Act, 1947, but subject to the other provisions of the Constitution, all laws which were in force immediately before its commencement, shall continue to be in force until altered, repealed or amended by a competent legislature or authority. Article 375 provides that "All courts of civil, criminal and revenue jurisdiction, all authorities, and all officers, judicial, executive and ministerial throughout the territory of India, shall continue to exercise their respective functions subject to the provisions of the Constitution". The unity and the uniformity of the judicial structure was preserved by placing such areas of law like criminal law and procedure, civil procedure, wills, succession, transfer of property other than agricultural lands, contracts, registration of deeds and documents, evidence etc. in the Concurrent List.

Sources of law

The main sources of law in India are the Constitution Statutes (legislation), customary law and case law. The statutes are enacted by Parliament, the state legislatures and the union territory legislatures. Then, there is a vast body of laws known as subordinate legislation in the form of rules, regulations as well as bye-laws which are made by the central and state governments and local authorities like municipal corporations, municipalities, village panchayats and other local bodies etc. This subordinate legislation is made under the authority conferred or delegated either by Parliament or the state or union territory legislatures concerned. Judicial decisions of the superior courts like the High Courts and the Supreme Court are an important source of law. The law declared by the Supreme Court is binding on all courts within the territory of India. As India is a land of diversities, local customs and conventions which are not against statute, morality etc., are also recognised and taken into account by the courts while administering justice in certain spheres.

Parliament is competent to make laws on the matters enumerated in the Union List. The state legislatures are competent to make laws on matters enumerated in the State List. Parliament alone has power to make laws on matters not included in the State List or Concurrent List. On matters enumerated in the Concurrent List, laws can be made both by Parliament as well as state legislatures. But in the event of repugnancy, the law made by Parliament shall prevail and the law made by the state legislature to the extent of the repugnancy, be void, unless, the latter law having been reserved for the consideration of the President has received his assent and in that event it shall prevail in that state.

Laws made by Parliament may extend throughout or any part of the territory of India and those made by state legislature may generally apply only within the territory of the state concerned. Hence,

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

variations are likely to exist from state to state in the provisions relating to a matter falling within the State and Concurrent Lists.

One of the unique features of the Indian Constitution is that notwithstanding the adoption of a federal system and the existence of Central Acts and State Acts in their respective spheres, it has generally provided for a single integrated system of courts to administer both the Union and the State Laws. At the apex of the entire judicial system stands the Supreme Court of India with a High Court for each state or group of states and under the High Courts, there is a hierarchy of subordinate courts.

There is generally separation of judiciary from executive. The panchayat courts also generally function in some states under the various names like *Nyaya Panchayat, Panchayat Adalat, Gram Kuchari,* etc. to decide civil and criminal disputes of petty and local nature. The different State Laws provide for different kinds of jurisdiction of the courts.

The country is divided into judicial districts presided over by a district and sessions judge who is the principal civil court of original jurisdiction and can try all offences including those punishable with death. He is the highest judicial authority in a district. Below him, there are courts of civil jurisdiction, known variously in different states as munsiffs, sub-judges, civil judges and the like. Similarly, the criminal judiciary consists of chief judicial magistrate and judicial magistrates of the first and the second class.

A detailed account of the Supreme Court of India, High Courts and Subordinate Courts is given below.

JUDICIARY

Supreme Court

The Supreme Court of India consists of a Chief Justice and not more than 17 other judges appointed by the President. The judges hold office till the age of 65. For appointment as a judge of the Supreme Court, a person must be a citizen of India and must have been for at least five years a judge of a High Court or of two or more such courts in succession; or an advocate of a High Court or of two or more such courts in succession for at least ten years or he must be in the opinion of the President, a distinguished jurist. Provision exists for the appointment of a judge of a High Court as an *ad-hoc* judge of the Supreme Court and for retired judges of the Supreme Court or High Courts to sit and act as judges of that Court.

The Constitution seeks to ensure the independence of the Supreme Court judges in various ways. A judge of the Supreme Court cannot be removed from office except by an order of the President passed after an address in each House of Parliament supported by a majority of the total membership of that House and by a majority of not less than two-thirds of the members present and voting, has been presented to the President in the same session for such removal, on the ground of proved misbehaviour or incapacity. A person who has been a judge of the Supreme Court is debarred from practising in any court of law or before any other authority in India.

The membership of the Court as on 1 December, 1979 was :

Chief Justice

Y. V. Chandrachud

Judges

P. N. Bhagwati

CC-0. Agamnigam Digital Preservation Foundation, Chandigarh

V. R. Krishna Iyer
R. S. Sarkaria
A. C. Gupta
N. L. Untwalia
S. Murtaza Fazal Ali
P. N. Shinghal
P. S. Kailasam
V. D. Tulzapurkar
D. A. Desai
R. S. Pathak
A. D. Koshal
O. Chinnappa Reddy
A. P. Sen
E. S. Venkataramiah

Jurisdiction of the Supreme Court

The Supreme Court has original, appellate and advisory jurisdiction. Its exclusive original jurisdiction extends to any dispute between the union and one or more states, or between the union and any state or states on one side and one or more other states on the other; or between two or more states, if and in so far as the dispute involves any question (whether of law or of fact) on which the existence or extent of a legal right depends. In addition, Article 32 of the Constitution gives an extensive original jurisdiction to the Supreme Court in regard to the enforcement of Fundamental Rights. It is empowered to issue directions or orders or writs, including writs in the nature of *habeas corpus, mandamus,* prohibition, *quo-warranto* and *certiorari* to enforce them.

The Supreme Court has been conferred powers to direct the transfer of any civil/criminal case from one state High Court to another state High Court or from a court subordinate to one state High Court to a court of competent jurisdiction subordinate to another state High Court. The Supreme Court, if satisfied, that cases involving the same or substantially the same questions of law are pending before it and in one or more High Courts or before two or more High Courts and that such questions are substantial questions of general importance, may withdraw the case or cases pending before the High Court or High Courts and dispose of all the cases itself.

The appellate jurisdiction of the Supreme Court can be invoked by the certificate of the High Court concerned or by special leave granted by the Supreme Court, in respect of any judgment, decree or final order of the High Court in cases both civil and criminal, involving substantial questions of law as to the interpretation of the Constitution. Appeals also lie to the Supreme Court in civil matters if the High Court concerned certifies (a) that the case involves a substantial question of law of general importance, and (b) that in the opinion of the High Court the said question needs to be decided by the Supreme Court. In criminal cases an appeal lies to the Supreme Court, if the High Court (a) has on appeal reversed an order of acquittal of an accused person and sentenced him to death or to imprisonment for life or for a period of not less than 10 years, or (b) has withdrawn for trial before itself any case from any court subordinate to its authority and has in such trial convicted the accused person and sentenced him to death or to imprisonment for life or for a period of not less than 10 years, or (c) certifies that the case is a fit one for appeal to the Supreme Court. Parliament is authorised to confer on the Supreme

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

Court any further powers to entertain and hear appeals from any judgement, final order or sentence in a criminal proceeding of a High Court.

The Supreme Court has also a very wide appellate jurisdiction over all courts and tribunals in India inasmuch as it may, in its discretion, grant special leave to appeal from any judgment, decree, determination, sentence or order in any cause or matter passed or made by any court or tribunal in the territory of India.

It has a special advisory jurisdiction in matters which may specifically be referred to it by the President under Article 143 of the Constitution.

Appeals also lie to the Supreme Court under the Representation of People Act, Monopolies and Restrictive Trade Practices Act, the Advocates Act, the Contempt of Courts Act etc.

High Courts

Every state has a High Court which stands at the head of the State's judicial administration. There are 18 High Courts in the country, including two having jurisdiction over more than one state. Among the union territories, Delhi alone has a High Court of its own. Goa, Daman and Diu has a judicial commissioner while the other seven union territories come under the jurisdiction of different state High Courts. Each High Court consists of a Chief Justice and such other judges as the President may from time to time, appoint. The Chief Justice of High Court is appointed by the President in consultation with the Chief Justice of India and the Governor of the state. The procedure for appointing other judges is the same except that the Chief Justice of the High Court concerned is also consulted. They hold office until they attain the age of 62 and are removable in the same manner as a judge of the Supreme Court of India. To be eligible for appointment as a judge, one must have held a judicial office in India for ten years or must have practised as an advocate of a High Court or two or more such courts in succession for a similar period.

Every High Court has the power to issue to any person or authority and government within its jurisdiction directions, orders or writs (including writs which are in the nature of *habeas corpus, mandamus,* prohibition, *quo warranto* and *certiorari,* or any of them) for the enforcement of any of the Fundamental Rights and for any other purpose.

This power may also be exercised by any High Court exercising jurisdiction in relation to the territories within which the cause of action, wholly or in part, arises for the exercise of such power, notwithstanding that the seat of such government or authority or the residence of such persons is not within those territories.

The High Courts have powers of superintendence over all courts within their jurisdiction. They can call for returns from such courts, make and issue general rules and prescribe forms to regulate their practices and proceedings and determine the manner and form in which books, entries and accounts shall be kept.

Table 24.1 gives the seat and territorial jurisdiction of the High Courts.

Subordinate Courts

Subject to minor variations, the structure and functions of the Subordinate Courts are more or less uniform throughout the country. A state is divided into a number of districts, each under the jurisdiction of a principal civil court presided over by a district judge. Sometimes he is assisted by additional district judges. Subordinate to a district judge is a hierarchy of different grades of civil courts.

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

TABLE 24.1
JURISDICTION AND SEAT OF HIGH COURTS

Name	Year of establishment	Territorial Jurisdiction	Seat of the Court
Allahabad	1866	Uttar Pradesh	Allahabad (Bench at Lucknow).
Andhra Pradesh	1954	Andhra Pradesh	Hyderabad
Bombay	1861	Maharashtra and Dadra and Nagar Haveli.	Bombay (Bench at Nagpur)
Calcutta	1861	West Bengal and Andaman and Nicobar Islands.	Calcutta
Delhi	1966	Delhi	Delhi
Gauhati	1972	Assam, Manipur, Meghalaya, Nagaland, Tripura, Mizoram and Arunachal Pradesh.	Gauhati, (Temporary (Benches at Imphal, Agartala and Kohima).
Gujarat	1960	Gujarat	Ahmedabad
Himachal Pradesh	1971	Himachal Pradesh	Simla
Jammu and Kashmir	1928	Jammu and Kashmir.	Srinagar and Jammu
Karnataka	1884	Karnataka	Bangalore
Kerala	1956	Kerala and Lakshadweep.	Ernakulam
Madhya Pradesh	1956	Madhya Pradesh	Jabalpur (Benches at Gwalior and Indore).
Madras	1861	Tamil Nadu and Pondicherry.	Madras
Orissa	1948	Orissa	Cuttack
Patna	1916	Bihar	Patna (Bench at Ranchi)
Punjab and Haryana	1947	Punjab, Haryana and Chandigarh	Chandigarh
Rajasthan	1949	Rajasthan	Jodhpur (Bench at Jaipur)
Sikkim	1975	Sikkim	Gangtok

Besides hearing suits, the civil courts exercise jurisdiction over several matters such as arbitration, guardianship, marriage, divorce and probate. Quasi-judicial tribunals distinct from the ordinary courts have also been set up under certain special Acts for determining some types of civil rights. In some cases, appeals lie from their orders to the ordinary civil courts. Every High Court exercises the power of superintendence over all courts subordinate to it subject to its appellate jurisdiction.

The Constitution and organisation of criminal courts and their procedure are regulated by the Code of Criminal Procedure, 1973 which came into force with effect from 1 April 1974, repealing the Code of Criminal Procedure, 1898. The Code provides separate sets of magistrates for the discharge of the executive and judicial functions. Magistrates, both executive and judicial, in so far as their judicial work is concerned, are subject to the superintendence and control of the High Court. There is a district magistrate and under him a number of subordinate magistrates. These magistrates continue to deal with problems relating to the maintenance of law and order and the prevention of crime. On the judicial side, the judicial hierarchy of magistrates consists of the chief judicial magistrate at the district level

INDIA-1980 CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

and the judicial magistrates of the first class and second class. Broadly speaking, magisterial functions, which are essentially judicial in nature, are the concern of the judicial magistrates. In metropolitan areas with a population of more than 10 lakhs, there are metropolitan magistrates who have larger powers for quicker disposal of cases.

As on 31 March 1978, the subordinate courts functioning in the country, at district-level, were : 1,973 district/additional district and sessions judges and assistant sessions judges/subordinate judges and 4,351 munsifs/magistrates.

Reform in Criminal Procedure

Radical changes in the criminal procedure have been made by the new Code of Criminal Procedure, 1973. Some more amendments were made in 1978. The new Code provides for the separation of judiciary from the executive on an all-India basis and makes several important changes designed to expedite the disposal of cases, to improve efficiency, to prevent abuses and to afford relief to the poorer sections of the community.

The system of appointing honorary magistrates or justices of the peace has been done away with. Instead, a provision has been made for the appointment of retired or serving officers of government as special judicial magistrates to try special categories of petty cases. The jury system has also been abolished.

Under the Code, every person arrested with or without warrant shall be informed of the grounds of his arrest and in bailable cases, on his right to be released on bail. A person can be kept in custody for 90 days where the investigation relates to offences punishable with death, imprisonment for life or for imprisonment for a term of not less than 10 years. Bail provisions have been liberalised. These include grant of anticipatory bail *i.e.* bail prior to arrest in certain cases.

Another major change is the doing away with committal proceedings in sessions cases. The powers of revision conferred on superior courts cannot be exercised in respect of interlocutory orders. The provision relating to compulsory stay of proceedings can, however, be obtained from superior courts in proper cases. Provision has also been made to provide an opportunity to the accused to make his representation, if any, on the punishment proposed to be given after conviction.

The provision for demanding security from habitual offenders has been extended to anti-social offenders like smugglers, blackmarketeers and persons, who default in provident fund contributions or commit offences under the Civil Rights Act, 1955 and the like.

A copy of the first information report will have to be given to the informant. If a police officer refuses to record the information, the aggrieved person can send it by post to the superintendent of police, who will pursue the matter.

Courts have been given power to punish blatant cases of perjury on the spot.

The period of detention in jail during remand shall be counted against the sentence of imprisonment ultimately awarded in the case.

Limits have been prescribed for the duration of security proceedings. Such proceedings shall ordinarily terminate, if they are not concluded within six months. Where the offence is punishable with imprisonment for two years or less, the investigation, if not completed within six months, can be stopped by a magistrate. Periods of limita-

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

tion on a graded scale for launching criminal prosecutions have been provided in cases not punishable with imprisonment for more than three years.

Legal aid at the expense of the State has been made compulsory in all sessions cases, if the accused is too poor to engage a counsel at his expense. The state governments have been empowered to extend this provision to other cases by a notification.

Attorney-General

The Attorney-General for India is appointed by the President to hold office during the pleasure of the President. He must be a person qualified to be appointed as a judge of the Supreme Court. He gives advice to the Government of India upon such legal matters, and performs such other duties of legal character, as may be referred or assigned to him by the President. In the performance of his duties, he has the right of audience in all courts in India as well as the right to take part in the proceedings of Parliament without the right to vote.

In the discharge of his functions, the Attorney-General is assisted by a Solicitor General and two Additional Solicitor Generals.

Advocate-General

There is an Advocate-General for each state who is appointed by the Governor to hold office during the pleasure of the Governor. He must be a person qualified to be appointed as a judge of a High Court. He gives advice to the state government upon such legal matters, and performs such other duties of a legal character, as may be referred or assigned to him by the Governor. The Advocate-General can take part in the proceedings of the state legislature without the right to vote.

Legal Profession

In India, the law relating to the legal profession is governed by the Advocates Act, 1961, and the rules framed by the Bar Council of India, thereunder. It is a self contained code of law relating to legal practitioners and for the constitution of State Bar Councils and the Bar Council of India.

There is only one class of persons entitled to practice the profession of law, namely, persons enrolled as advocates under the Advocate Act with one of the State Bar Councils. The dual system of attorney and advocate which was in existence in the High Courts of Bombay and Calcutta had been abolished with effect from 15 October 1976. There are two classes of advocates—"senior advocates" and "other advocates". The roll of advocates of each State Bar Council shall contain two parts—part I containing the names of "senior advocates" and part II containing the names of "other advocates". No person shall be enrolled as an advocate on the roll of more than one State Bar Council. An advocate may with his consent be designated as senior advocate, if the Supreme Court or a High Court is of opinion that by virtue of his ability, standing at the bar or special knowledge or experience in law, deserved such distinction.

Some of the restrictions on a senior advocate in the matter of his practice are, that he shall not file a *vakalatnama*; he shall not appear without an advocate on record; he shall not accept instructions to draft pleadings etc., without the consultation of an advocate in Part II of the state roll; he shall not accept directly from a client any brief, or instructions to appear in a court etc.

An advocate on the roll of one State Bar Council may apply for transfer to any other State Bar Council in the prescribed manner. Certain standard of education etc. have been prescribed for enrolment

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

as advocates. There are certain rules regulating the standards of professional conduct and etiquette.

Every advocate shall bear in mind that any one genuinely in need of a lawyer is entitled to legal aid even though he can not pay for it fully or adequately, and within the limits of an advocate's economic condition, free legal assistance to the indigent and oppressed is one of the higher obligations an advocate owes to society.

The Bar Councils have disciplinary jurisdiction over advocates on their rolls. This is subject to a right of appeal to the Bar council of India and a further right of appeal to the Supreme Court of India.

LAW COMMISSION

The need for periodical revision of the form and content of the law has been recognised for a long time in all countries. Changing social and economic conditions as well as changed concepts on certain ethical issues necessitate a review of the existing laws from time to time. Without a standing body which would be entrusted with a systematic review of the law, this work cannot be performed satisfactorily. This has been the basic philosophy underlying the move for the creation of law commissions in various countries.

In India, the Law Commission was first constituted in 1955 and has, since then, been reconstituted from time to time. The principal function of the Law Commission may be described as bringing the law up to date.

The Law Commission was last re-constituted with effect from 1 October 1977 to the end of August 1980. The Commission at present consists of a retired Judge of a High Court as chairman, two full time members and one member secretary of the status of a secretary to the Government of India. Up to the end of December 1978, the Commission has forwarded to the government 77 reports, the last report being on the subject of "delay and arrears in trial courts." The terms of reference of the present Law Commission are :

To keep under review the system of judicial administration to ensure that it is responsive to the reasonable demands of the time and in particular to secure—

(a) elimination of delays, speedy clearance of arrears and reduction in costs so as to secure quick and economical disposal of cases without effecting the cardinal principal that decisions should be just and fair;

(b) simplification of procedure to reduce and eliminate technicalities and devices for delay so that it operates not as an end in itself but as a means of achieving justice; and

(c) improvement of standards of all concerned with the administration of justice.

To examine the existing laws in the light of Directive Principles of State Policy and to suggest ways of improvement and reform and also to suggest such legislation as might be necessary to implement the Directive Principles and to attain the objectives set out in the Preamble to the Constitution.

To revise the Central Acts of general importance so as to simplify them and to remove anomalies, ambiguities and inequities.

To consider and to convey to the government its views on any other subject relating to law and judicial administration that may be referred to it.

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

PERSONAL LAW

In India, there are people of different religions and faiths. They are governed by different set of personal laws in respect of matters relating to family affairs, i.e. marriage, divorce, succession, etc. As regards matters relating to contract, crime, evidence, property, etc., they are governed by uniform set of laws irrespective of their religious faith and beliefs. A short resume is given below in respect of personal laws that are prevalent in India at present.

Marriage

The law relating to marriage has been codified in different Acts applicable to people of different religions. These are :—

(1) The Hindu Widows Remarriage Act, 1856; (2) The Converts Marriage Dissolution Act, 1866; (3) The Indian Divorce Act, 1869; (4) The Indian Christian Marriage Act, 1872; (5) The Kazis Act, 1880; (6) The Anand Marriage Act, 1909; (7) The Child Marriage Restraint Act, 1929; (8) The Parsi Marriage and Divorce Act, 1936; (9) The Dissolution of Muslim Marriages Act, 1939; (10) The Special Marriage Act, 1954; (11) The Hindu Marriage, Act 1955; and (12) The Foreign Marriage Act, 1969.

The Special Marriage Act, 1954, extends to the whole of India except the State of Jammu and Kashmir and also applies to citizens of India domiciled in the territories to which the Act extends who are in the State of Jammu and Kashmir. Persons governed by this Act can specifically register the marriage under the said Act even though they are of different religious faiths. The Act also provides that the marriage celebrated under any other form can also be registered under the special Marriage Act if it satisfies the requirements of the Act.

The Hindu Marriage Act, 1955, which also extends to the whole of India except the State of Jammu and Kashmir, applies also to Hindus domiciled into Territories to which the Act extends who are outside the said territories. It applies to Hindus of all denominations, including Buddhists, Sikhs, Jains, and all those who do not profess to be Muslims, Christians or Parsis or Jews. However, the Act does not apply to the members of any scheduled tribes unless the government otherwise directs. An attempt has been made to codify the customary law which is prevalent in Hindus by enacting the Hindus Marriage Act, 1955. However, in spite of this codification, the courts in this country have always held that—

> 'the concept of marriage under the Hindu law, however, has not undergone any radical change by the enactment of the Hindu Marriage Act. In fact, the basic structure of that concept has not at all been touched and it remains a *Sanskar* or a sacrament. To a Hindu, marriage is not a matter of agreement or contract but is a spiritual union of the two souls. Holy invocation before the fire and *saptapadi* are the minimum requisites for solemnisation of the Hindu marriage. Unless, therefore, it is established that there is a different custom which admits of any different form of marirage known to the Hindus, these rites and ceremonies will have to be established by the complainant before any claim that the spouse is guilty of the offence under section 496. Indian Penal Code, is made in such cases *vide Shakuntala* vs. *Neelakanth*, 1973 (Maharashtra Law Journal, p. 310).

By the recent amendment made by the Marriage Laws (Amend-

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

ment) Act, 1976, the grounds of divorce which were available under the Hindu Marriage Act, 1955, and the Special Marriage Act, 1954, have been further extended. The Provisions in regard to divorce are contained in section 13 of the Hindu Marriage Act and section 27 of the Special Marriage Act. The common ground on which divorce could be sought by a husband or a wife under these Acts fall under the broad heads : adultery; desertion; cruelty; unsoundness of mind; venereal disease; leprosy; and being not heard of as alive for seven years.

As regards the Christian community, the provisions relating to marriage and divorce are contained in the Indian Christian Marriage Act, 1872 and the Indian Divorce Act, 1869. The provisions in regard to divorce applicable to Christian community are contained in section 10 of the Indian Divorce Act. Under that section, a husband can seek a divorce on the ground that the wife has been guilty of adultery, but the wife can seek a divorce on the ground that the husband has become convert to another religion and has gone through a marriage with another woman or has been guilty of : (a) incestuous adultery; (b) bigamy with adultery; (c) marriage with another woman with adultery; (d) rape, sodomy or bestiality; (e) adultery coupled with such cruelty as without adultery would have entitled her to a divorce, *a mensa et toro* (a system of divorce created by Roman Church equivalent to judicial separation on the grounds of adultery, perverse practices, cruelty, heresy and apostasy); (f) adultery coupled with desertion without reasonable excuse for two years or upwards.

As regard Muslims, the marriages are governed by the customary law prevalent in the country. As regards divorce, *i.e. talaq,* a Muslim wife has no right to dissolve her marriage. Unwritten and traditional law tried to ameliorate her position by permitting her to seek dissolution under the following forms :—

(a) *Talaq-i-Talwid* : This is a form of delegated divorce. According to this, the husband delegates his right of divorce in a marriage contract which may stipulated that, *inter alia,* on his taking another wife, the first wife has a right to divorce him. The courts have upheld these pre-nuptial and post-nuptial agreements as not opposed to public policy nor against the spirit of Muslim law (cf, *Saimuddin* vs. *Latifunnisa,* ILR (1918) 46 Cal). This right has been strengthened by the judgement of the Assam High Court by declaring that the power of *talaq* given to the wife is irrevocable (*Saifuddin* vs. *Soneka,* AIR 1955 Ass. 153).

(b) *Khul* : This is a dissolution by an agreement between the parties to the marriage on the wife's giving some consideration to the husband for her release from the marriage tie. The terms are a matter of bargain and usually takes the form of the wife giving up her dower.

Mubarrat : This is divorce by mutual consent.

Further by the Dissolution of Muslim Marriages Act, 1939, a Muslim wife has been given the right to dissolve the marriage on the following grounds :

(1) that the whereabouts of the husband have not been known for a period of four years; (2) husband is not maintaining her for a period of two years; (3) imprisonment of husband for a period of seven years; (4) failure on the part of the husband to perform his marital obilgations for a period of three years; (5) impotency of hus-

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

band; (6) insanity for a period of two years; (7) suffering from leprosy or virulent venereal disease; and (8) cruelty.

The Parsis Marriage and Divorce Act, 1936, governs the matrimonial relations of the Parsis. The word Parsi is defined in the Act as Parsi Zoroastrian, both of Indian and Iranian origin. A Zoroastrian is a person who professes the Zoroastrian religion. The word 'Parsi' has a racial significance. Every marriage as well as divorce under this Act is required to be registered in accordance with the procedure prescribed in the Act. However, failure to fulfil the requirements in that behalf does not make the marriage invalid. The Act provides for monogamy.

As regards the matrimonial laws of Jews, there is no codified law in India. Even today, they are governed by their religious laws. The Jews regard marriage not as a civil contract but as a relation between two persons involving very sacred duties. Marriage can be dissolved through the courts on grounds of adultery or cruelty. The marriages are monogamous

The Hindu law relating to adoption has been amended and codiblish equality of sexes and provide for equal protection of laws to both the spouses. As regards personal laws relating to minority communities, it has been the policy of the government to encourage reforms therein only on the initiative of those communities.

Child Marriage

The Sarada Act, i.e., the Child Marriage Restraint Act, 1929, as recently amended by Act 2 of 1978, now provides that the marriage age for male will be 21 years and that for female 18 years. This amendment has been brought into force with effect from 1 October 1978.

Adoption

There has been no general law of adoption though it is permitted by a statute amongst the Hindus and by custom amongst a few numerically insignificant categories of persons. Since adoption is the legal affiliation of a child, it forms the subject-matter of personal law. Muslims, Christians and Parsis have no adoption laws and have to approach the court under the Guardians and Wards Act, 1891. Muslims, Christians and Parsis can take a child under the said Act only under foster care. Once a child under the foster care becomes major, he is free to break away all his connections. Besides, such a child does not have the legal right of inheritance.

Foreigners who want to adopt Indian children have to approach the court under the aforesaid Act. In case the court has given permission for the child to be taken out of the country, adoption according to a foreign law (*i.e.* law applicable to guardian) takes place out side the country.

The Hindu law relating to adoption has ben amended and codified into the Hindu Adoption and Maintenance Act, 1956. Under the Act, the object of adoption is purely secular and is in line with the principle of social justice.

Guardianship

In dealing with the question of guardianship of a minor child, as in other spheres of family law, there is no uniform law. Three distinct legal systems are prevalent, that is to say the Hindu law, Muslim law and the Guardians and Wards Act, 1890.

A guardian may be a natural guardian, testamentary guardian or a guardian appointed by court. In deciding the question of guardianship, two distinct things have to be taken into account—the person of the

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

minor and his property. Often the same person is not entrusted with both.

The Hindu Minority and Guardianship Act, 1956, has codified the laws of the Hindus. As in the case of uncodified law it has upheld the superior right of the father. It lays down that a child is a minor till the age of 18. The natural guardian for both boys and unmarried girls is first the father and after him the mother. The prior right of the mother is recognised only to the custody of children below five. In the case of illegitimate children, the mother has a better claim than the putative father. The Act makes no distinction between the 'person' of the minor and his property and therefore guardianship implies control over both. The Act directs that in deciding the question of guardianship, the courts must take the welfare of the child as the paramount consideration.

Under the Muslim law, the father enjoys a dominant position. It also makes a distinction between guardianship and custody. For guardianship, which has usually reference to the guardianship of property, the father is preferred and in his absence his executor. If no executor has been appointed by the father, the guardianship passes on to the paternal grandfather. Among the *Shias* the difference is that the father is regarded as the sole guardian but after his death it is the right of the grandfather to take over the responsibility and not that of the executor. Both the schools however, agree that the father while alive is the sole guardian. The mother is not recognised as a natural guardian even after the death of the father.

As regards rights of the natural guardian there is no doubt that father's right extends both to property and person. Even when the mother has the custody of the minor child, the father's general right of supervision and control remains. The father, can however, appoint the mother as a testamentary guardian. Thus though the mother may not be recognised as a natural guardian, there is no objection to her being appointed under the father's will.

Muslim law recognises that mother's right to custody of minor children (*Hizanat*) is an absolute right. Even the father cannot deprive her of it. Misconduct is the only condition which can deprive the mother of this right. As regards the age at which the right of the mother to custody terminats, the *Shia* school holds that the mother's right to *hizanat* is only during the period of weaning which is over when the child has completed the age of two, whereas the *Hanafi* school extends the period still the minor son has reached the age of seven. In case of girls the *Shia* law upholds the mother's right till the girl reaches seven and the *Hanafi* schol till she attains puberty.

Guardians and Wards Act, 1890

This Act governs all communities. It clearly lays down that the father's right is primary and no other person can be appointed unless the father is found unfit. This Act also provides that the court must bear in mind the welfare of the child.

Maintenance

The obligation of the husband to maintain the wife arises out of the status of the marriage. The right to maintenance forms a part of the personal law and to that extend is not uniform, but uniform provisions are contained in sections 125 to 128 of the Criminal Procedure Code, 1974.

CC-0. Agamnigam Digital Preservation Foundation, Chandigarh

Under the Code of Criminal Procedure, the right of maintenance extends not only to wife, dependant children but also to indigent parents and to divorced wives. The claim of the wife etc. however, depends on the husband having sufficient means. The claim of maintenance for all dependant persons is limited to Rs 500 per month. The inclusion of the right of maintenance under the Code of Criminal Procedure has the great advantage of making the remedy both speedy and cheap. However, divorced wives who have received money payable under the customary personal law are not entitled to claim maintenance under the Criminal Procedure Code.

Under Hindu law, the wife has an absolute right to claim maintenance irrespective of the husband having adequate means. But she loses her right if she deviates herself from the path of chastity. Even a single lapse from chastity on her part may affect her right detrimentally. Her right to maintenance is codified in the Hindu Adoption and Maintenance Act, 1956. In assessing the amount of maintenance, the court takes into account various factors like the position and status of the parties, the reasonable wants of the claimant and the obligations and liabilities of the husband. It also judges whether the wife is justified in living apart from the husband. The justifiable reasons are spelt out in the Act.

Maintenance *pendente lite* (pending the suit) and even the expenses of a matrimonial suit will be borne by either husband or the wife if the other spouse has no independent income for his or her support. The same principle will also govern the payment of permanent maintenance.

Under the Muslim law, the failure of the husband to maintain his wife for two years entitles her to get a divorce. Her right to maintenance lasts only as long she remains a wife. If she is divorced, she loses her right of maintenance and is only entitled to it for three months *i.e.* the period of *iddat*. After this period, she has no further claim.

The Parsi Marriage and Divorce Act, 1936 recognises only the right of the wife to maintenance—both alimony *pendente lite* as well as permanent alimony.

The maximum amount that can be decreed by the court as alimony during the time a matrimonial suit is pending in court is 1/5th of the husband's net income. In fixing the quantum as permanent maintenance, the court will determine what is just bearing in mind the ability of the husband to pay, the wife's own assets and the conduct of the parties. The order will remain in force as long as the wife remains chaste and unmarried.

The Indian Divorce Act, 1869 governs the maintenance rights of a Christian wife. The provisions are the same as those under the Parsi Law, and the same considerations are applied in granting maintenance, both alimony *pendente lite* as well as permanent maintenance.

SUCCESSION

Prior to 1925, there were a number of statutes dealing with succession. In 1925, the Indian Succession Act was enacted. The object of the Act was to consolidate the large number of laws which were in existence at that time. The laws governing succession to Muslims and Hindus were excluded from the purview of the Act. While consolidating the law in respect of succession, two schemes, one relating to suc-

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

cession to the property of persons, like Indian Christians, Jews and persons married under the Special Marriage Act, 1955 and another relating to succession rights of Parsis were adopted.

In the first scheme, *i.e.*, persons who were not Parsis, when a person dies intestate leaving a widow and lineal descendant, she would be entitled to a fixed share of one-third of the property and the children, irrespective of their sex, would share equally. This law was amended subsequently with the object of improving the rights of the widow and it was provided that where the intestate died leaving a widow and no lineal descendant and the net value of the estate does not exceed Rs 5,000, she would be entitled to the whole of his property. Where the net value of the estate exceeds Rs 5,000, she is entitled to a charge for a sum of rupees five thousand with interest at four per cent till payment and in the residue she is entitled to her share.

The Act imposes no restriction on the power of a person to will away his property.

Under the second scheme, the Act provides for Parsi intestate succession. A feature of the rule governing the Parsi intestate is that like the Hindu law and unlike the Muslim law, there are separate rules for the devolution of the property of male and female Parsi intestates. For example, if a male Parsi dies leaving a widow and children, the property will be divided so that the share of each son and widow will be double the share of each daughter. Further, when a male Parsi dies leaving one or both parents in addition to a widow and children, the property will be so divided that the father shall receive a share equal to half the share of a son and the mother will receive a share equal to half the share of a daughter.

Hindu Law of Succession

The Hindu law of succession was governed, previous to the enactment of Hindu Succession Act, 1956 by the customary law of Hindus. The most remarkable features of the Act, however, are the recognition of the right of women to inherit equally with men and the abolition of the life estate of female heirs.

Muslim Law of Succession

A vast majority of Muslims in India follow the *Hanafi* doctrines of *Sunni* law and the courts presume that muslims are governed by the *Hanafi* law unless it is established to the contrary. Though there are many features in common between the *Shia* and the *Sunni* schools, there are differences in some respects. The *Sunni* law regards the Koranic verses of inheritance as an addendum to the pre-Islamic customary law and preserves the superior position of male agnates.

Unlike Hindu and Christian law, Muslim law restricts a person's right of testation. A Muslim can bequeath only one-third of his estate. A bequest to a stranger is valid without the consent of heirs if it does not exceed a third of the estate, but a bequest to a heir without the consent of other heirs is invalid. The consent of heirs to a bequest must be secured after the succession has opened and any consent given to a bequest during the lifetime of the testator can be retracted after his death. The *Shia* law allows the Muslims the freedom of bequest within the disposable third.

Legal Aid to Poor

The Legal Aid Scheme is a recent development in India. The legal system is becoming complex day by day and people with

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

limited means are finding it difficult to meet the cost of litigation. In order to enable them to get legal aid and advice, Legal Aid Schemes have been started in some states. The principle of equal justice and free legal aid is embodied in Article 39A of the Constitution as one of the Directive Principles of State Policy. To provide an adequate legal services programme in the country on a uniform basis, a committee was constituted with Justice P. N. Bhagwati, Supreme Court Judge, as chairman, Justice V. R. Krishna Iyer, Supreme Court Judge, as member in May 1976 to go into the matter. The committee has submitted its final report on National Juridicare, "Equal Justice-Social Justice". The report was presented to Parliament in December 1977. Pending formulation of any scheme for legal aid a token provision of one lakh rupees has been provided for the purpose in the budget during 1979-80.

POLICE AND PRISONS

Police

The police force in the country is enjoined with the responsibility of maintenance of Public order and prevention and detection of crimes. Public order and police being state subjects under the constitution, police in India is maintained and controlled by the states.

The head of police force in a state is the Inspector General of Police. The state is divided into convenient territorial divisions called 'Ranges' and each police range is under the administrative control of a deputy inspector general of police. A number of districts constitute the Range. The district police is further sub-divided into police divisions, circles and police stations. Besides civil police, the states also maintain their own armed police and have got separate intelligence branches, crime branches etc.

The police set up in big cities like Delhi, Calcutta, Bombay, Madras, Bangalore, Hyderabad, Ahmedabad and Nagpur, is directly under a commissioner of police who enjoys magisterial powers.

All senior police posts in the various states are included in the state IPS cadres to which recruitment is made on an all-India basis. Recruitment, promotion and cadre control in respect of the lower posts from police constables upto deputy superintendent of police are done by the state governments themselves.

The central government maintains a number of central forces, which are in the nature of other armed forces of the union. Besides the Central Bureau of Intelligence (IB), Central Bureau of Investigation (CBI), a number of institutions for the training of police officers and for scientific or technical assistance in the investigation and detection of crimes are maintained by the central government.

Intelligence Bureau

The primary function of the Intelligence Bureau is to collect, collate, assess and disseminate intelligence relating to national security and other matters affecting the security of the country. The Intelligence Bureau liaises with departments of the Government of India for this purpose and also coordinates the activities of the special branches of the criminal investigation/intelligence departments in the states. It is headed by a Director.

Central Bureau of Investigation

Created in 1963, the CBI, undertakes investigation of important cases concerning public servants in the employ of the central government and its corporate undertakings, and also cases having inter-state

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

or International ramifications. It is headed by a Director.

During the year 1979 the CBI indexed 3,504 new criminals involved in international crimes, 7,962 new criminals involved in inter-state crimes, and 24,398 new items of property. The Bureau received 257 finger prints from various national crime bureaux for verification. It also received 616 Interpol notices for circulation to various agencies.

Border Security Force

The charter of duties laid down for the Border Security Force is :

(i) to promote a sense of security among the people living in the border; (ii) to prevent trans-border crimes, unauthorised entry into or exit from the territory of India; and (iii) to prevent smuggling and any other illegal activities. In addition, the Force, during the period of war has a supplementary role with the Army and functions directly under the operational control of the Army. Being an armed force, BSF units are called upon to undertake various internal security duties and are also employed in aid to civil adminstration.

The Force Headquarters, located in Delhi is headed by a Director-General. It maintains adequate liaison with other forces operating on the border areas like customs, revenue intelligence and local police authorities. Maintenance of boundary pillars is an additional task which is undertaken in co-operation with Survey of India authorities.

During 1979, the Force seized smuggled goods valued Rs 1.25 crore, apprehended about 6,000 persons engaged in smuggling activities, faced 158 armed encounters and pushed back 27,555 persons while they were trying to cross illegally or unauthorisedly over to our side of the border.

The Force has four major training institutions, namely, (i) BSF Academy at Tekanpur which undertakes the training of recruits NGO's and officers both initial and advance training; (ii) Training Centre and School at Hazaribagh undertakes training and specialises in Jungle training; (iii) Central School of Weapons and Tactics at Indore; and (iv) Central School of Mechanical Transport at Saugar. The Force has also set up a factory at its training institution at Tekanpur for manufacturing tear smoke shells and grenades which are used by the police force in the country.

Central Reserve Police Force

The Central Reserve Police Force was raised in 1939 and it was known as the "Crown Representative's Police".

After Independence, the "Crown Representative's Police" was renamed as the "Central Reserve Police". Later, the appelation "Force" was added to the name. It is headed by a Director-General with Headquarters in Delhi.

The primary task of the force is that of assisting the states in maintaining law and order throughout the country. During external aggression, part of the force is also deployed for duties under army operation.

Assam Rifles

The Assam Rifles have been assigned the following role :

(i) Protection and security of India's international border especially that of the sensitive spots; (ii) Maintenance of law and order in the tribal areas of Arunachal Pradesh, Nagaland Mizoram, Manipur and Tripura; and (iii) Assistance to the State Police of Arunachal Pradesh, Nagaland, Mizoram, Manipur and Tripura.

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

The Force is headed by an Inspector General with headquarters at Shillong. In 1979-80 it continued to be deployed in Nagaland, Manipur, Sikkim, Arunachal Pradesh and Mizoram. Working under the operational control of the army it rendered assistance in the maintenance of internal security in north-eastern region and helped ensure the security of international borders in the area of its deployment. The Force captured a number of hostiles and a sizeable amount of arms/ammunition/equipment.

Central Industrial Security Force

The Force was created under an Act of Parliament in 1969 for the better protection and security of industrial undertakings, owned and controlled by the central government. The Force is administered by an Inspector-General with its Headquarter located in New Delhi. For the administrative convenience and the operational efficiency, the country has been divided into 3 zones; *viz.*, Eastern, Southern and North-Western. The Force, in each of these zones, functions under the operational and administrative supervision of a deputy inspector-general. In addition, the security set up of major industrial undertakings, such as, the four steel plants, *viz.*, Bhilai, Durgapur, Rourkela and Bokaro; Bharat Coking Coal Limited, Jharia; Heavy Engineering Corporation; Ranchi, is headed by an officer of the rank of deputy inspector-general.

Institute of Criminology and Forensic Sciences

The Institute imparts in-service training to officers of the police, judicial and correctional services and also experts in forensic science. It also organises and promotes research in the fields of criminology and forensic science.

Police Commission

The government appointed a National Police Commission in 1977 to consider, in depth, the major issues of an all India character relating to police administration in the country. The Commission is to suggest measures for enhancing the functional efficiency of the police and also for transforming the police force into an instrument of public service. The Commission has submitted three reports so far. It is likely to submit two more reports.

Sardar Vallabhbhai Patel National Police Academy

The SVP National Police Academy, the premier police training institution of the country, was established in 1948 to impart basic training to Indian Police Service probationery officers. In addition, the Academy also conducts thrice in a year a 14-week reorientation course for senior officers of 8 to 10 years seniority, 9 months course for sub-inspectors of the C.B.I., a ten days course on crime prevention for IPS officers with four to seven years of service and senior deputy superintendents of police. A top management development programme of two weeks duration for officers of the level of deputy inspector general of police is also being organised every year in the form of a seminar. A one month's basic terminal training course for IPS officers who have completed one year training in the field is conducted in addition to the above programmes.

Home Guards and Civil Defence

Home Guards and Civil Defence are statutory voluntary organisations devoted to the service of the people, specially, during an emergency and other natural calamities. Whereas Home Guards organisation extends

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

throughout the country, Civil Defence is confined to border areas and other vulnerable cities.

The role of the Home Guards is to serve as auxiliary to the police in maintaining internal security, help the community in any kind of emergency like air raid, fire, flood, an epidemic and so on. They also provide essential services, disaster relief and promote communal harmony. The object of Civil Defence is to save life, minimise damage to property and to maintain continuity of production during an emergency.

Both these voluntary organisations have approximately five lakh members each and have rendered exemplary service during national emergencies. During peace time Home Guards have helped the police in the maintenance of law and order, essential services, traffic control, guard duty, night patrolling, besides emergency relief and rescue operations during natural calamities. They are now taking part also in socio-economic developmental activities.

PRISONS

The subject "prisons, reformatories and other institutions of like nature, persons detained therein and arrangement with other states for the use of prisons and other institutions" is included in the state list of the seventh schedule to the Constitution. The administration and management of prisons including maintenance and upkeep of prisoners is regulated under the Prisons Act, 1894, the Prisoners Act, 1900 and the Transfer of Prisoners Act, 1950, as adopted by states and amended from time to time. The day-to-day administration of prisons is carried on in accordance with the rules framed under these Acts and incorporated in prison manuals of the respective states.

At present the country has 1,169 jails—75 central jails, 250 district jails, 786 sub-jails, 24 special jails, 19 open jails, 12 institutions for youthful offenders and 3 women jails. The administrative set up of jails in states is headed by the Inspector Generals of prisons.

Prison Reform

Even though prison administration has been a subject matter of close study and deliberation since the dawn of independence, during the last two years it has evoked an unprecedented concern and awareness on the part of the central and state governments. The Indian Jails Committee's report (1920) which defined the aim of prison administration as "prevention of further crime and restoration of the criminal to society as a reformed character" set the trend for prison reform in the country. Thereafter several expert bodies—Dr W. C. Reckless, a UN Expert on criminology and correctional administration (1951-52), the All India Jail Manual Committee (1957-59) and the Working Group on Prisons (1972-73) studied the problems facing prison administration in the country and recommended concrete steps to improve the living conditions in prisons and streamline the prison administration. The All India Jail Manual Committee brought out a model prison manual containing elaborate standards and guidelines aimed at transferring jails into reformatory centres.

In April, 1979, a conference of chief secretaries of various states and union territory administrations was convened by the Ministry of Home Affairs to consider and suggest measures to deal with the problems posed by a large number of undertrials. The conference made a number of recommendations to reduce overcrowding in jails. These included establishment of an effective system of regular review of cases of undertrials, appointment of part-time or whole-time law officers in

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

jails to enable undertrials to contest their cases in courts, setting up of new courts speedily, amendment of the law relating to the transfer of prisoners. The other recommendations made by the conference were : creation of separate facilities for the care, treatment and rehabilitation of women offenders, segregation of juveniles, improving the system of inspection and supervision in jails so as to avoid indiscipline and malpractices, strengthening of training facilities for jail staff, work programme for all able-bodied prisoners, setting up of state and national boards of visitors and revision of state jail manuals on the lines of the model prison manual.

The matters relating to improvement in prison administration were discussed at a subsequent conference held on 3 April 1980. The conference made various recommendations which included : undertaking crash programmes by states for providing flush/septic tank latrines and adequate drinking water facilities, change in the approach of the prison administration to the problems of prisoners and introduction of initial and in-service training to prison personnel, segregation of women and youthful offenders, organisation of programme for adult literacy.

To help state governments in their efforts to undertake jail reforms the Government of India formulated a scheme in 1977 to give financial assistance for prison reforms. The areas for priority attention chosen were renovation of prison buildings, modernisation of prison industries and agriculture, construction of residential accommodation for prison staff, provision of scientific and technological facilities in prisons and equipment for training of prison personnel. Stress was laid more on the improvement of living conditions and standards of maintenance of prisoners. The funds sanctioned to various state governments in two years 1977-78 and 1978-79 amounted to Rs six crores. The seventh finance commission has recommended on allocation of Rs 48.31 crores in the form of grants-in-aid for upgradation of standards of jail administration including upkeep of prisoners for five years (1979-84). Priority has been accorded by the commission to ensure adequate direct expenditure on food, clothing and medicines for prisoners, to improve basic amenities like water supply, sanitary facilities, electrification etc. and to develop additional jail capacity in states.

The Government of India are actively persuing with the state governments the revision of their respective jail manuals on the basis of the guidelines contained in the model prison manual. The recommendations made by the conference of chief secretaries of states are also being processed in consultation with them. With regard to various aspects of prison reform, the National Institute of Social Defence; Department of Social Welfare, Government of India, provides technical assistance and consultancy to the central and state governments. Director, National Institute of Social Defence, functions as the ex-officio prison adviser to the Ministry of Home Affairs.

LAWS OF PARLIAMENT

In 1978 (from 1 October to 31 December), 12 Bills were enacted as laws and in 1979 (upto 30 September), 32 Bills, including a Constitution Amendment Bill were enacted as laws. List of Bills enacted as Laws during the period are given in tables 24.2 and 24.3. The scope and purpose of some of the important laws enacted during the period are given below :—

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

The Employment of Children (Amendment) Act, 1978

Amends the Employment of Children Act, 1938, to prevent the exploitation of child labour in workshops and other specified occupations. Section 3 of the principal Act, as it stood, prohibited the employment of a child who has not completed his fifteenth year in certain occupations in railways and in ports. This section has been amended to extend the prohibition of employment of such child in certain other occupations in the railway premises.

The Additional Duties of Excise (Textiles and Textile Articles) Act, 1978

Provides for the levy and collection of an additional duty of excise at the rate of 10 per cent of the total amount of excise duty chargeable on certain textiles and textile articles specified in the Schedule to the Act.

The Prize Chits and Money Circulation Schemes (Banning) Act, 1978

Bans the promotion or conduct of prize chits and money circulation schemes.

The Water (Prevention and Control of Pollution) Amendment Act, 1978.

Amends the Water (Prevention and Control of Pollution) Act, 1974, in order to remove certain drawbacks that had come to the notice of the government in the implementation of the principal Act.

The Code of Criminal Procedure (Amendment) Act, 1978

Amends the Code of Criminal Procedure, 1973, in order to remove certain difficulties and doubts that had been found in the working of the principal Act. The amendments, among other things, empowers the state government to establish special courts of judicial magistrates having jurisdiction throughout any local area and to confer on such courts exclusive jurisdiction to try any particular case or particular class of cases.

The Suppression of Immoral Traffic in Women and Girls (Amendment) Act, 1978

Amends the Suppression of Immoral Traffic in Women and Girls Act, 1956, mainly to give effect to the recommendations contained in the sixty-fourth report of the Law Commission and to make good certain inadequacies that had come to light in the administration of the principal Act. The amendment Act, *inter alia,* makes a distinction between corrective institution and protective home and for the release, on probation of good conduct or after due admonition, of certain persons convicted of offences under the principal Act. The Act also provides for rescue and intermediate custody of women and girls and for the establishment of special courts to try cases under the principal Act.

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

The Payment of Bonus (Amendment) Act, 1978

Amends the Payment of Bonus (Amendment) Act, 1977, to provide for payment of a minimum bonus of 8.33 per cent for the accounting year commencing on any day in the year 1977 irrespective of whether there was any allocable surplus.

The Sugar Undertakings (Taking Over of Management) Act, 1978

Provides for the vesting of management in the central government of certain sugar undertakings in certain circumstances.

The Copra Cess Act, 1979

With a view to ensuring that the coconut Development Board, established under the Coconut Development Board Act, 1979, has the necessary resources to discharge its functions, this Act provides for the imposition of a cess on copra.

The Coconut Development Board Act, 1979

Provides for the establishment of a Coconut Development Board for the integrated development of the coconut industry under the control of the union.

The Working Journalists and other Newspaper Employees (Conditions of Service) and Miscellaneous Provisions (Amendment) Act, 1979

Amends the Working Journalists and other Newspaper Employees (Conditions of Service) and Miscellaneous Provisions Act, 1955, so as to provide for the constitution of tribunal for the purpose of fixing or revising rates of wages in respect of working journalists and non-journalist newspaper employees.

The Punjab Excise (Delhi Amendment) Act, 1979

Amends the Punjab Excise Act, 1914, as in force in the union territory of Delhi so as to empower the imposition of a special excise duty retrospectively at such rate or rates, as not exceeding the rates set forth in the new Schedule 1-A, on any excisable article including liquor for human consumption.

The Sugar Undertakings (Taking over of Management) Amendment Act, 1979

Amends section 3 of the Sugar Undertakings (Taking Over of Management) Act, 1978, so as to make it clear that the arrears of cane dues, of more than ten per cent of the total price of the cane purchased during the immediately preceding sugar year, on the basis of which action can be taken by the central government for the taking over of the management of a sugar undertaking, relate to cane purchased at any time, whether in the current sugar year or in any earlier sugar year or sugar years and whether before or after the commencement of the principal Act.

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

The Merchant Shipping (Amendment) Act, 1979

Amends the Merchant Shipping Act, 1958, to provide for an obligation on the holders of certificates of competency and other certificates under the principal Act to serve for a certain minimum period on Indian ships.

The Special Courts Act, 1979

Provides for the establishment by the central government, by notification, of an adequate number of courts to be called Special Courts. A special court will consist of a sitting Judge of a High Court nominated by the Chief Justice of the High Court, with the concurrence of the Chief Justice of India. Only those cases can be tried by Special Courts in respect of which the central government has made a declaration to the effect that it is of the opinion that there is *prima facie* evidence of the commission of an offence during the period of operation of the proclamation of emergency dated 25 July 1975 by a person who held high public or political office in India and that in accordance with the guidelines contained in the preamble to the Act the offence ought to be dealt with under the Act. The trial before a Special Court will be in accordance with the procedure prescribed by the Code of Criminal Procedure for the trial of warrant cases before a magistrate.

The Union Duties of Excise (Distribution) Act 1979

Provides for the payment out of the Consolidated Fund of India of sums equivalent to a part of the net proceeds of certain union duties of excise to the states to which the law imposing the duty extends and for the distribution of these sums among those states in accordance with the principles recommended by the Finance Commission in its report dated 28 October 1978.

The Salary, Allowances and Pension of Members of Parliament (Amendment) Act, 1979

Amends the Salary, Allowances and Pension of Members of Parliament Act, 1954, in order to allow a blind member the facility of an attendant while performing journeys by air and also to extend the same facility to a member who is so incapacitated physically as to require the assistance of an attendant.

The Inter-State Migrant Workmen (Regulation of Employment and Conditions of Service) Act, 1979

Regulates the employment of inter-state migrant workmen and provides for their conditions of service and for matters connected therewith.

The Haryana and Uttar Pradesh (Alteration of Boundaries) Act, 1979

Provides for the alteration of boundaries between the states of Haryana and Uttar Pradesh on the basis of Shri Uma Shankar Dikshit Award of 14 February 1975.

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

The Constitution (Forty-fourth) Amendment Act, 1978

Amends the Constitution of India in order to take away from the category of fundamental rights the right to property, to put the right to life and liberty on a secure footing, to provide safe-guards against the misuse of the emergency provisions, to guarantee the right of the media to report freely and without censorship the proceedings in Parliament and State Legislatures, to minimise judicial delays, and to remove or correct the distortions which came into the Constitution by reason of the amendments enacted during the period of internal emergency.

INDIA 1980
CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

TABLE 24 ·2

LAWS OF PARLIAMENT DURING 1978[1]

Sl. No.	Bill	Initiating Chamber	When Introduced	When Passed by the originating chamber	When passed/returned by the other Chamber	Date of President's Assent
1	2	3	4	5	6	7
1.	The Repealing and Amending Bill, 1978	R.S.	18-7-78	26-7-78	21-11-78	26-11-78
2.	The Employment of Children (Amendment) Bill, 1978	R.S.	17-5-78	26-7-78	27-11-78	29-11-78
3.	The Additional Duties of Excise (Textiles and Textile Articles) Bill,1978	L.S.	21-11-78	22-11-78	30-11-78	6-12-78
4.	The Britannia Engineering Company Limited (Mokameh Unit) and the Arthur Butler and Company (Muzaffarpore) Limited (Acquisition and Transfer of Undertakings) Bill, 1978	L.S.	28-7-78	21-11-78	29-11-78	8-12-78
5.	The Bolani Ores Limited (Acquisition of Shares and Miscellaneous Provisions) Bill, 1978	L.S.	31-8-78	20-11-78	23-11-78	8-12-78
6.	The Prize Chits and Money Circulation Schemes (Banning) Bill, 1978	L.S.	15-5-78	20-11-78	28-11-78	12-12-78
7.	The Water (Prevention and Control of Pollution) Amendment Bill, 1978	L.S.	25-7-78	21-11-78	30-11-78	12-12-78
8.	The Code of Criminal Procedure (Amendment) Bill,1978	L.S.	15-5-78	28-11-78	6-12-78	18-12-78
9.	The Suppression of Immoral Traffic in Women and Girls(Amendment) Bill, 1978	L.S.	28-7-78	22-11-78	15-12-78	26-12-78
10.	The Motor Vehicle (Amendment) Bill, 1978	L.S.	17-8-78	29-11-78	12-12-78	26-12-78
11.	The Payment of Bonus (Amendement) Bill, 1978	L.S.	24-11-78	20-12-78	26-12-78	30-12-78
12.	The Sugar Undertakings (Taking Over of Management) Bill,1978	L.S.	27-11-78	19-12-78	26-12-78	30-12-78

1. From I October 1978 only. For laws from January to September 1978, See India-1979.

TABLE 24·3

LAWS OF PARLIAMENT DURING 1979[1]

Sl.No.	Bill	Initiating Chamber	When Introduced	When passed by the originating Chamber	When passed/returned by the other Chamber	Date of President's Assent
1	2	3	4	5	6	7
1.	The Appropriation (Railways) No.4 Bill, 1978[2]	L.S.	20-12-78	21-12-78	—	8-1-79
2.	The Appropriation (Railways) No.5 Bill, 1978[3]	L.S.	20-12-78	21-12-78	—	8-1-79
3.	The Appropriation (No.5) Bill, 1978[4]	L.S.	21-12-78	22-12-78	—	10-1-79
4.	The Copra Cess Bill, 1979	L.S.	25-7-78	20-2-79	1-3-79	8-3-79
5.	The Coconut Development Board Bill, 1979	L.S.	25-7-78	20-2-79	1-3-79	17-3-79
6.	The Working Journalists and other Newspapers Employees (Conditions of Service) and Miscellaneous Provisions (Amendment) Bill,1979	L.S.	19-2-79	21-2-79	5-3-79	19-3-79
7.	The Appropriation (Vote on Account) Bill, 1979	L.S.	16-3-79	19-3-79	26-3-79	29-3-79
8.	The Appropriation Bill, 1979	L.S.	19-3-79	20-3-79	26-3-79	29-3-79
9.	The Appropriation (No.2) Bill, 1979	L.S.	19-3-79	20-3-79	26-3-79	29-3-79
10.	The Appropriation (Railways) Bill, 1979	L.S.	19-3-79	20-3-79	27-3-79	29-3-79
11.	The Appropriation (Railways) No. 2 Bill, 1979	L.S.	19-3-79	20-3-79	27-3-79	29-3-79
12.	The Punjab Excise (Delhi Amendment) Bill, 1979	L.S.	16-3-79	21-3-79	27-3-79	29-3-79
13.	The Mizoram Appropriation (Vote on Account) Bill, 1979	L.S.	21-3-79	23-3-79	27-3-79	31-3-79
14.	The Mizoram Appropriation Bill, 1979	L.S.	21-3-79	23-3-79	27-3-79	31-3-79
15.	The Pondicherry Appropriation (Vote on Account) Bill, 1979	L.S.	23-3-79	26-3-79	28-3-79	31-3-79
16.	The Pondicherry Appropriation Bill, 1979	L.S.	23-3-79	26-3-79	28-3-79	31-3-79
17.	The Industries (Development and Regulation) Amendment Bill, 1979	L.S.	22-2-79	26-3-79	28-3-79	31-3-79
18.	The Sugar Undertakings (Taking Over of Management) Amendment Bill, 1979	L.S.	19-2-79	20-3-79	27-3-79	31-3-79
19.	The Constitution (Forty-fourth Amendment) Bill, 1978[5]	L.S.	15-5-78	23-8-78 7-12-78[6]	31-8-78	30-4-79
20.	The Appropriation (No.3) Bill, 1979	L.S.	23-4-79	24-4-79	30-4-79	3-5-79

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

1	2	3	4	5	6	7
21.	The Merchant Shipping (Amendment) Bill, 1979	L.S.	31-8-78	29-11-78 27-4-79[7]	5-3-79	4-5-79
22.	The Finance Bill, 1979	L.S.	28-2-79	26-4-79	7-5-79	10-5-79
23.	The Special Courts Bill, 1979	L.S.	21-2-79	9-3-79 8-5-79[8]	21-3-79	16-5-79
24.	The Additional Duties of Excise (Goods of Special Importance) Amendment Bill, 1979	L.S.	12-4-79	9-5-79	17-5-79	20-5-79
25.	The Union Duties of Excise (Distribution) Bill, 1979	L.S.	12-4-79	9-5-79	17-5-79	20-5-79
26.	The Goa, Daman and Diu Appropriation (Second vote on Account) Bill, 1979	L.S.	14-5-79	15-5-79	21-5-79	25-5-79
27	The Estate Duty (Distribution) Amendment Bill, 1979	L.S.	12-4-79	9-5-79	17-5-79	25-5-79
28.	The Salary, Allowances and Pension of Members of Parliament (Amendment) Bill, 1979	L.S.	30-3-79	9-5-79	15-5-79	25-5-79
29.	The Kosangas Company (Acquisition of Undertaking) Bill, 1979	L.S.	13-3-79	30-4-79	15-5-79	26-5-79
30.	The Parel Investments and Trading Private Limited and Domestic Gas Private Limited (Taking Over of Management) Bill, 1979	L.S.	13-3-79	30-4-79	15-5-79	26-5-79
31.	The Inter-State Migrant Workmen (Regulation of Employment and conditions of Service) Bill, 1979	L.S.	26-4-79	9-5-79	21-5-79	11-6-79
32.	The Haryana and Uttar Pradesh (Alteration of Bounderies) Bill, 1979	L.S.	15-5-78	30-4-79	22-5-79	11-6-79

1. Upto 30 June 1979 only.
2. The Bill passed by Lok Sabha and transmitted to Rajya Sabha for its consideration was not returned to Lok Sebha within a period of fourteen days from the date of its receipt in Rajva Sebha, was deemed to have been passed by both Houses at the expiration of the said period in accordance with clause (5) of article 109 of the Constitution.
3. The Bill, passed by Lok Sabha and transmitted to Rejya Sabha for its consideration was not returned to Lok Sabha within a period of fourteen days from the date of its receipt in Rajya Sabha, was deemed to have been passed by both Houses at the expiration of the said period in accordance with clause (5) of article 109 of the Constitution.
4. The Bill, passed by Lok Sabha and transmitted to Rajya Sabha for its consideration was not returned to Lok Sabha within a period of fourteen days from the date of its receipt in Rajva Sabha, was deemed to have been passed by both Houses at the expiration of the said period in accordance with clause (5) of article 109 of the Constituton.
5. The Bill was introduced in Lok Sabha as 'The Constitution (Forty-fifth Amendment) Bill, 1978'. The short-title was changed by Lok Sabha through an amendment to clause I thereof.
6. Amendments made by Rajya Sabha in the Bill on 31-8-78 were agreed to by Lok Sabha on 7-12-78.
7. Amendments made by Rajya Sabha in the Bill on 5-3-79 were agreed to by Lok Sabha on 27-4-79.
8. Amendments made by Raj ya Sabha in the Bill on 21-3-79 were agreed to by Lok Sabha on 8-5-79.

INDIA 1979 Digitized by Arya Samaj Foundation Chennai and eGangotri Digital Preservation Foundation, Chandigarh

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

25 STATES AND UNION TERRITORIES

Note : Area figures for all states and union territories are provisional as on 1 July 1971 except in the case of Andaman and Nicobar Islands where they relate to 1 January 1966.

ANDHRA PRADESH

Area : 2,76,914 sq km	*Population* : 4,35,02,708
Capital : *Hyderabad*	*Principal languages* : Telugu and Urdu

AGRICULTURE

Agriculture is the main occupation of about 74 per cent of the people of Andhra Pradesh. Thirty-five per cent of the cultivated area is irrigated. The state is surplus in foodgrains, particularly rice. Other important crops are jowar, bajra, maize, ragi, small millets, pulses, tobacco, cotton, sugarcane, groundnut and bananas. The production of foodgrains was 106.67 lakh tonnes in 1978-79. The state accounts for about 55 per cent of the country's entire production of castor and 94 per cent of Virginia tobacco.

Forests cover 23.3 per cent of state's area. Important forest products are tea, eucalyptus, cashew, casuarina, bamboo, soft wood and miscellaneous species.

INDUSTRY

The state is endowed with a rich variety of minerals. In fact, Andhra Pradesh has a virtual monopoly of quality 'chrysotile asbestos' in the country. It accounts for about 75 per cent of India's total production of barytes. Other important minerals found are copper ore, manganese, mica, coal and limestone. The state ranks sixth in manganese ore production in the country.

Several major industries have been established in the state, especially around Hyderabad and Vishakhapatnam. These produce machine tools, synthetic drugs, pharmaceuticals, heavy electrical machinery, ships, fertilizers, electronic equipment, aeronautical parts, cement, chemicals, asbestos, cement products and glass.

IRRIGATION AND POWER

Important irrigation schemes implemented include Nagarjunasagar project, Prakasam barrage, Tungabhadra low level canal, Kurnool-Cuddapah canal, Kadam project, Romperu drainage project and Upper Pennar project in addition to numerous other medium and minor irrigation schemes.

Important power projects are the Machchkund, Upper Sileru, Lower Sileru, Tungabhadra Dam and Nizam Sagar Hydel power schemes and Nellore, Ramagundam, Kothagudam and Hussain Sagar (Hyderabad) thermal stations. The per capita consumption of electricity, which was 2.5 kwh at the beginning of the First Plan, rose to 91 kwh by the end of March 1980. The installed capacity, both hydel and thermal, was 1,678 mw in 1978-79. The state's prestige power project, the Srisailam hydro-electric project, is under construction.

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

Governor : K. C. Abraham

Council of Ministers[1]

Chief Minister : M. Channa Reddy

Cabinet Ministers : N. Amarnatha Reddy, M. Baga Reddy, P. V. Choudary, C. Dass, P. Ganga Reddy, M. M. Hashim, T. Hayagrivachari, N. Janardhana Reddy, A. Madan Mohan, M. Manik Rao, V. Nageswara Rao, K. B. Narasappa, K. Obula Reddy, G. Raja Ram, B. Ramdev, Smt Roda Mistry, G. V. Sudhakara Rao, V. Venkatanarayana, B. Venkat Ram Reddy, Y. Venkata Rao, G. Venkataswamy, K. V. R. S. Padmanabha Raju, K. Ranga Rao, P. Sekhavataram and A. Veerappa.

Ministers of State : Ahmed Shareef, N. Bhaskara Rao, Nizam Vali, M.S.V. Prasad Rao, G. Ramaswamy, A. Vangala Reddy and S. Venkata Reddy.

Legislative Council[1]

Chairman : Syed Mukkassir Shah
Deputy Chairman : K. Keshava Rao

Legislative Assembly[1]

Speaker : D. K. Choudhary
Deputy Speaker : K. Prabhakar Reddy

High Court[1]

Chief Justice : C. Kondaiah

Judges : A. Kuppuswami, K. Madhava Reddy, K. Ramachandra Rao, T. Lakshmaiah, K. A. Muktadar, P. Chennakesava Reddy, V. Madhava Rao, S. Madhusudan Rao, K. Punnayya, A. Raghuveer, A. Gangadhara Rao, K. Jayachandra Reddy, B. P. Jeevan Reddy, Smt K. Amareswari, P. A. Chowdary, A. Sitarama Reddy, G. Ramanujulu Naidu and P. Ramachandra Raju.

Public Service Commission[1]

Chairman : Y. Sivashankara Reddy
Members : T. V. Narayana and Gulam Ahmed

Chief Secretary : S. R. Ramamurty

AREA POPULATION AND HEADQUARTERS OF DISTRICTS

District	*Area* (*sq km*)	*Population* (1971 *census*)	*Headquarters*
1. Adilabad	16,133	12,88,348	Adilabad
2 Anantapur	19,125	21,15,321	Anantapur
3. Chittoor	15,763	22,85,536	Chittoor
4. Cuddapah	15,356	15,77,267	Cuddapah
5. East Godavari	10,970	30,87,262	Kakinada
6. Guntur	11,377	28,44,488	Guntur
7. Hyderabad Urban[2]	102·7	18,39,711	Hyderabad
8. Karimnagar	11,824	19,63,928	Karimnagar
9. Khammam	15,872	13,69,892	Khammam
10. Krishna	8,734	24,93,574	Bandar/Masulipatnam
11. Kurnool	18,799	19,82,090	Kurnool
12. Mahbubnagar	18,419	19,32,082	Mahbubnagar
13. Medak	9,685	14,67,944	Sangareddi
14. Nalgonda	14,242	18,19,738	Nalgonda

[1]As on 2 April 1980.

CC-0. Agamnigam Digital Preservation Foundation, Chandigarh

District	*Area (sq km)*	*Population (1971 census)*	*Headquarters*
15. Nellore	13,058	16,09,617	Nellore
16. Nizamabad	7,969	13,13,268	Nizamabad
17. Prakasam	6,413	25,89,991	Srikakulam
18. Ranga Reddy[2]	7,730	9,47,982	Hyderabad
19. Srikakulam	6,413	17,76,132	Ongole
20. Vishakhapatnam	10,927	20,15,531	Vishakhapatnam
21. Vizianagaram[3]	6,142	16,04,335	Vizianagaram
22. Warangal	12,875	18,70,933	Warangal
23. West Godavari	7,744	23,74,306	Eluru

[2]Hyderabad district was bifurcated into Hyderabad Urban and K. V. Ranga Reddy districts in August 1978. Temporarily the headquarters of the newdistrict is located in Hyderabad.

[3]The Vizianagaram district was formed on 1 June 1979 with areas from out of the then Srikakulam and Vishakhapatnam districts.

ASSAM

Area : 78,523 sq km — *Population* : 1,46,25,152
Capital : Dispur (Temporary) — *Principal language* : Assamese

AGRICULTURE

The area under foodcrops accounts for over 72 per cent of the total cultivated area. The principal food crop is rice while the main cash crops are jute, tea, cotton, oilseeds, sugarcane, potato and fruits. Rice production and the area under it during 1978-79 was 19.49 lakh tonnes and 20.52 lakh hectares respectively. Production of jute during the same period is expected to reach one lakh bales. An area of 75,000 hectares was under wheat cultivation during the year.

Forests cover 20.9 per cent of the total area of the state. Main forest products are timber, bamboo, reeds, medicinal herbs, lac, cane and elephant tusks.

INDUSTRY

Assam is rich in mineral wealth. It holds a unique position in the production of mineral oil. Other minerals found in the state are coal, limestone, refractory clay, dolomite and natural gas.

Of the agriculture based industries, tea occupies an important place. There are nearly 750 tea plantations in the state. Petroleum and petroleum products form the other main industries. Assam produces about 50 per cent of the country's total petroleum output and natural gas. The state has two oil refineries and the third, with a petrochemical complex, is under way. There is also a public sector fertilizer factory at Namrup. Other industries are sugar, jute, silk, paper, plywood manufacture, and rice and oil milling. Important cottage industries are handloom, sericulture, manufacture of cane and bamboo articles, carpentry, smithy and manufacture of brass utensils. The race of industrialisation in the state has been boosted up significantly with the setting up of five district industries centres (DIC). An export oriented handloom project has been started at Sualkuchi to exploit the export potentialities of Eri and Muga.

IRRIGATION AND POWER

The two medium irrigation schemes started in the state during the Third Five Year Plan and which spilled over to the Fourth Plan were

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

the Yamuna and Sukla irrigation projects. The Yamuna project was commissioned in 1969 and the Sukla project in 1978. At present there are 4 medium and more than 200 minor irrigation projects in the state. Execution of one major, 9 medium and 218 minor projects has started. It has been decided to develop a gross irrigation coverage of 7.67 lakh hectares of land against a total net crop area of 31.76 lakh hectares in the state. New power projects are under construction at Lakwa and Bongaigon.

Assam had only 20 electrified villages in 1951; the number has now increased to 4,226 up to March 1979 under the rural electrification scheme.

GOVERNMENT

Governor : L. P. Singh

Assam has been placed under the President's rule since 12 December 1979 and the State Assembly has been kept in animated suspension.

Legislative Assembly[1]

Speaker : Vacant.
Deputy Speaker : Vacant

High Court[1]

Chief Justice : Dambarudhar Pathak

Public Service Commission[1]

Chairman : A. K. Choudhury

Chief Secretary : Ramesh Chandra

AREA, POPULATION AND HEADQUARTERS OF DISTRICTS

District	*Area (sq km)*	*Population (1971 census)*	*Headquarters*
1. Cachar	6,962	17,13,318	Silchar
2. Darrang	8,775	17,36,188	Tezpur
3. Goalpara	10,359	22,25,103	Dhubri
4. Kamrup	9,863	28,54,183	Gauhati
5. Karbi Anglong	10,332	3,79,310	Diphu
6. North Cachar Hills	4,890	76,047	Haflong
7. Nowgong	5,561	16,80,895	Nowgong
8. Sibasagar	8,989	18,37,389	Jorhat
9. Lakhimpur	5,646	7,11,600	North Lakhimpur
10. Dibrugarh	7,023	14,11,119	Dibrugarh

BIHAR

Area : 1,73,876 sq km
Capital : Patna
Population : 5,63,53,369
Principal language : Hindi

AGRICULTURE

Irrigated area forms about 26 per cent of the cultivable area of the state. The principal food crops are rice, wheat, maize, ragi and pulses. Main cash crops are sugarcane, oilseeds, tobacco and jute. The production of foodgrains was about 101 lakh tonnes in 1978-79 compared to 97 lakh tonnes in 1977-78.

Forests cover about 17 per cent of the area. Important forest products are timber, *kendu* leaves, lac, gum and resin.

INDUSTRY

Bihar is one of the richest states in India in mineral wealth, accounting for about 40 per cent of the total mineral production in the country. It has huge deposits of copper, apatite and kyanite and sizeable deposits

[1]As on 4 July 1980.

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

of coal, mica and china clay. It is also one of the principal iron ore producing states. Other important minerals found are manganese, limestone, graphite, chromite, asbestos, barytes, dolomite, felspar, columbite, pyrites, saltpetre, glass sands, slate, lead, silver, building stones and radio-active minerals.

The Tata Iron and Steel Company and the Tata Engineering and Locomotive Company at Jamshedpur, the fertilizer factory at Sindri, the heavy machine tool factory and foundry forge project at Ranchi, the steel plant at Bokaro, the oil refinery at Barauni, the aluminium plant at Muri (Ranchi), explosives factory at Gomia and paper factory at Dalmianagar, Hindustan Copper Corporation at Ghatsila, a zinc production unit at Tundu (Dhanbad), marine diesel engineering, ball bearing and wire rope units at Ranchi are some of the major industrial ventures in the state. The high tension insulator factory and the electric equipment factory at Ranchi, Bihar State Spun Silk Mill at Bhagalpur, scooter project at Fatwa, super phosphate factory at Sindri and a modern rice mill at Bikramganj are some of the important Bihar State public sector enterprises. There are 29 sugar factories, seven cement factories, seven distilleries, three jute mills and two wagon-making units. There are 18,918 small scale industrial units in the state.

Bihar is famous for its tussore silk industry which employs more than one lakh persons. A spun silk mill in the public sector has been set up at Bhagalpur. Handicrafts occupy an important place among the cottage industries of Bihar.

Six Industrial Area Development Authorities are functioning at Adityapur, Bokaro, Darbhanga, Patna, Ranchi and Muzaffarpur. Twenty industrial estates are located in different parts of the state. With a view to stepping up the pace of industrial development, the state government has set up the Bihar State Credit and Investment Corporation, the Bihar State Leather Industries Development Corporation, a sugar corporation, an export corporation, the Bihar State Handloom, Powerloom and Handicrafts Development Corporation, the Bihar State Industrial Development Corporation, the Bihar State Small Industries Corporation, Bihar State Financial Corporation, Bihar State Textile Corporation, Bihar State Electronic Corporation and Bihar State Pharmaceutical Chemical Corporation.

IRRIGATION AND POWER

Major irrigation projects are on rivers Kosi, Gandak, Sone, Badua, Chandan, North Koel and Bagmati. Badua and Chandan projects have been completed. There are a number of small and medium irrigation projects to benefit tribal areas. Several flood control schemes are in various stages of completion. The state shares the benefits of the multi-purpose Damodar Valley Project with West Bengal in respect of power.

Major power projects are the Patratu thermal power station, Barauni thermal power station, Subaranarekha and Kosi hydro-electric power station under Bihar State Electricity Board and Bokaro and Chandrapura thermal power stations and Tilaiya, Maithon and Panchet hydel power stations under the Damodar Valley Corporation.

The total installed capacity of power, hydel, thermal and diesel in March 1979 was 1,732 mw. The number of electrified villages which was 18,425 as on 31 March 1978 increased to 18,703 by March 1979. For irrigation, 1,43,615 pumpsets/tube-wells had been energised by March 1979 as against 1,39,982 in March 1978.

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

GOVERNMENT

Governor : A. R. Kidwai

Council of Ministers[1]

Chief Minister : Dr Jagannath Mishra

Cabinet Ministers : Nasiruddin Haider Khan, Rajendra Pratap Singh, Ramashray Prasad Singh, Karam Chand Bhagat, Misri Suda, Budhadeo Singh, Jagnarain Trivedi, Shankar Dayal Singh, Laliteshwar Prasad Shahi, Dr Umeshwar Prasad Verma, Yogeshwar Prasad Yogesh, Chaudhary Salah Uddin, Lahtan Choudhary, Ramesh Jha, Sami Nadri, T. Mochirai Munda, Ghanshyam Singh.

Ministers of State : Hardeo Prasad, Dr Prabhunath Singh, Raghunath Jha, Shamayele Nabi, Sagir Ahmad, Sadanand Singh, Rajo Singh, Madan Prasad Singh, Shankar Pratap Deo, Smt Uma Pandey, Smt Prabhawati Gupta, Matuiur Rahman, Ramdeo Rai, Dilkeshwar Ram, Prem Narain and Lallan Shukla.

Deputy Ministers : Kumid Ranjan Jha, Karuneshwar Singh, Shyam Sunder Singh 'Dheeraj', Ishwari Ram Paswan and Ranjit Sinha.

Legislative Council[2]

Chairman : Vacant
Deputy Chairman : Sushri Rajeshwari Saroj Das

Assembly[3]

Legislative Assembly : Radha Nand Jha
Dy. Speaker : Vacant

Chief Justice : K. B. N. Singh
Judges : S. Sarwar Ali, S. P. Sinha, R. P. Sinha, B. P. Jha, H. L. Agarwal, L. M. Sharma, S. K. Jha, N. P. Singh, S. K. Choudhary, Udai Sinha, S. Ali Ahmad, V. P. Sinha, M. P. Sinha, Brishketu Saran Sinha, S. A. Narain, G. M. Mishra, P. S. Sahay, Chaudhary S. S. Sinha and Syed S. Hasan.

Additional Judges : Manoranjan Prasad, Satyeshwar Rai, Vishwanath Mishra, U. C. Sharma, M. P. Verma and R. P. Mandal.
Ad-hoc Judge : Muneshwari Sahai

Public Service Commission[2]

Chairman : Dr Kumar Bimal
Members : K. P. N. Singh, F. Ahmad, Jiwand Singh, Ram Bhagat Paswan, Yogesh Murmu, K. M. Zuberi, Dr Sidheshwar Prasad and B. P. Singh

Chief Secretary : P. P. Nayyar

AREA, POPULATION AND HEADQUARTERS OF DISTRICTS

District	*Area* (*sq km*)	*Population* (1971 *census*)	*Headquarters*
1. Patna	3,181·9	22,50,883	Patna
2. Nalanda	2,346·1	13,06,062	Biharsharif
3. Gaya	4,287·5	19,24,289	Gaya
4. Aurangabad	4,408·9	12,92,666	Aurangabad
5. Nawadah	3,647·6	12,40,518	Nawadah
6· Bhojpur	4,023·8	19,95,146	Arrah

[1]As on 9 June 1980
[2]As on 10 April 1980.
[3]As on 15 September 1980

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

District	*Area (sq km)*	*Population (1971 census)*	*Headquarters*
7. Rohtas	7,296·2	19,43,888	Sasaram
8. Saran	2,656·8	17,09,722	Chapra
9. Siwan	2,250·8	14,62,067	Siwan
10. Gopalganj	2,044·4	11,07,464	Gopalganj
11. Champaran, East	4,333·8	19,56,084	Motihari
12. Champaran, West	4,862·2	15,87,019	Bettiah
13. Muzaffarpur	3,160·1	19,09,059	Muzaffarpur
14. Vaishali	2,018·7	13,48,990	Hajipur
15. Sitamarhi	2,659·2	15,82,632	Sitamarhi
16. Darbhanga	2,296·0	15,17,151	Darbhanga
17. Samastipur	2,856·4	18,24,714	Samastipur
18. Madhubani	3,526·6	18,92,039	Madhubani
19. Monghyr	7,927·6	27,45,180	Monghyr
20. Bhagalpur	5,656·0	20,91,103	Bhagalpur
21. Santhal Pargana	14,129·0	31,86,908	Dumka
22. Begusarai	1,899·4	11,47,429	Begusarai
23. Saharsa	5,885·0	23,50,268	Saharsa
24. Purnea	7,984·6	28,04,869	Purnea
25. Katihar	3,028·4	11,36,994	Katihar
26. Palamau	12,667·0	15,04,350	Daltonganj
27. Hazaribagh	11,152·5	16,45,838	Hazaribagh
28. Giridih	6,907·5	13,74,376	Giridih
29. Ranchi	18,331·0	26,11,445	Ranchi
30. Dhanbad	2,994·0	14,66,417	Dhanbad
31. Singhbhum	13,447·0	24,37,799	Chaibasa

GUJARAT

Area : 1,95,984 sq km — *Population* : 2,66,97,475
Capital : Gandhinagar — *Principal language* : Gujarati

AGRICULTURE

Gross irrigated area forms 15 per cent of the total cultivated area and 17 per cent of the total sown area in Gujarat. The main food crops are bajra, jowar, rice and wheat. Important commercial crops are cotton, tobacco and groundnut.

Production of foodgrains was 44.85 lakh tonnes in 1978-79 as against 38.73 lakh tonnes in 1977-78. Production of sugarcane was 3.29 lakh tonnes, cotton 21.01 lakh bales and oil seeds 20.03 lakh tonnes in 1977-78.

Forests cover 10.05 per cent of the area of the state. Main forest products are teak, khair, haldarvo and bamboo. Gujarat is the pioneering state in the field of social forestry which has culminated into a community forestry project for which the World Bank has sanctioned financial aid of Rs 64 crore. The Gujarat State Forest Development Corporation deals in scientific collection and development of minor forest produce. It has already made good progress and increased its share-capital from Rs 1 crore to Rs 2 crore.

INDUSTRY

Textiles (including ginning and pressing of cotton), heavy chemicals, such as caustic soda and soda ash, petro-chemicals, drugs and pharma-

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

ceuticals, electronic and electrical goods, engineering goods, machine-tools, cement and sugar are some of the important industries.

Extensive exploration and production of oil and natural gas on commercial basis in Ankleshwar, Cambay and Kalol areas has put Gujarat on the country's oil map. The setting up of the oil refinery at Koyali, having capacity of refining 70 lakh tonnes of crude a year has led to considerable development of the petro-chemical industries in this area. The Olefin complex set up by the Indian Petro-chemical Corporation Ltd., involving a capital investment of Rs 350 crore, is a major development in the field of petro-chemicals industries in the country. Considerable development has also taken place in the matter of production of nitrogenous fertilisers in Hui area. The Gujarat State Fertilizer Company has been in existence for more than a decade now. The state government has also promoted, jointly with GSFC, another big fertiliser project being implemented by Gujarat Narmada Valley Fertiliser Company which is to be based on fuel-oil, with a capital investment of about Rs 445 crores.

Apart from textiles, readymade garments and synthetic fabrics, the state is exporting salt, drugs and pharmaceuticals, electrical and engineering goods, machine-tools, building hardwares and handicraft goods, as also de-oiled cake, bone-meal, footwear, oil engines, barges, etc.

IRRIGATION AND POWER

Some of the important major irrigation projects completed since 1947 include Ukai, Kadana, Kakrapar, Mahi Right Bank Canal Project Stage I, Shetrunji, Dantivada, Hathmati, Meshwa and Bhadar. Besides reservoirs have been created on the river Sabarmati at Dhoroi and the Panam near Kel-dezar.

The total installed capacity, both hydel and thermal, at the end of December 1979 was about 2,100 mw. As on 30 December 1979, 10,283 villages had been electrified and the energisation of wells had gone up to 1,96,653 .

GOVERNMENT

Governor : Smt Sharda Mukherjee

Council of Ministers[1]

Chief Minister : Madhavsinh Solanki
Cabinet Ministers : Sanat Mehta, Prabodh Raval, Trambaklal Dave, Amarsinh Chaudhary, Manoharsinhji Jadeja, Mahant Vijaydasji and Khodiden Jhula.

Ministers of State : Smt Kokilaben Vyas, Mohmed Surti, Bhavsinh Jhala, Dr Devjibhai Vanvi, Harihar Khambholja and Maganbhai Solanki.

Deputy Ministers : Kiritsinh Gohil, Balvant Manvaran, Purshottam Makwana, Khimji Jesang, Lalit Patel, Mohamed Hussain Baloch, Lalit Parmar and Chandrakant Patel.

Legislative Assembly[2]

Speaker : Natwarlal Patel
Deputy Speaker : Ramanikbhai Dhami

High Court[3]

Chief Justice : B. J. Diwan
Judges : S. H. Sheth, M. P. Thakkar, P. D. Desai, B. K. Mehta, A. N. Surati, N. H. Bhatt, A. M. Ahmadi, M. K. Shah, R. C. Mankad, S. B.

[1]As on 7 June 1980.
[2]As on 1 January 1980.
[3]As on 6 August 1980.

CC-0. Agamnigam Digital Preservation Foundation, Chandigarh

Majumdar, G. T. Nanavati, V. V. Bedarkar, D. H. Shukla, S. L. Talati and D. C. Gheewala.

Public Service Commission[2]

Chairman : H. K. Solanki
Member : M. J. Chaudhari

Chief Secretary : H. K. L. Capoor

AREA, POPULATION AND HEADQUARTERS OF DISTRICTS

District	*Area* (*sq km*)	*Population* (1971 *census*)	*Headquarters*
1. Ahmedabad	8,707	29,10,307	Ahemdabad
2. Amreli	6,760	8,48,730	Amreli
3. Banaskantha	12,702	12,65,383	Palanpur
4. Bharuch	9,045	11,09,601	Bharuch
5. Bhavnagar	11,155	14,05,285	Bhavnagar
6. Gandhinagar	649	2,00,642	Gandhinagar
7. Jamnagar	14,125	11,11,343	Jamnagar
8. Junagadh	10,607	16,56,677	Junagadh
9. Kheda	7,194	24,51,387	Kheda
10. Kachchha	45,612	8,49,769	Bhuj
11. Mahesana	9,027	20,92,468	Mahesana
12 Panchmahals	8,866	18,48,804	Godhra
13 Rajkot	11,203	16,24,072	Rajkot
14. Sabarkantha	7,390	11,87,637	Himatnagar
15. Surat	7,745	17,86,924	Surat
16 Surendranagar	10,488	8,45,454	Surendranagar
17. The Dangs	1,683	94,185	Ahwa
18. Vadodara	7,788	19,80,065	Vadodara
19. Valsad	5,238	14,28,742	Valsad

HARYANA

Area : 44,222 sq km
Capital : Chandigarh
Population : 1,00,36,808
Principal language : Hindi

Over 72 per cent of the people of Haryana are engaged in agricultural pursuits. Out of the total cultivable area of 37.64 lakh hectares in the state, 51.5 per cent was irrigated during 1977-78. Out of the total cropped area of 54.22 lakh hectares, 24.06 lakh hectares was irrigated. The state is surplus in foodgrains, particularly wheat and rice. Other important crops are sugarcane, oilseeds and cotton. Production of foodgrains in 1978-79 was 63.54 lakh tonnes as against 53.61 lakh tonnes in 1977-78; production of sugarcane (gur) was 6.85 lakh tonnes in 1978-79 as against 8.97 lakh tonnes in 1977-78; production of cotton was 6.03 lakh bales in 1978-79 as against 4.63 lakh bales in 1977-78; production of oilseeds was 0.94 lakh tonnes in 1978-79 as against 0.98 lakh tonnes in 1977-78.

Forests cover about 3.7 per cent of the state's area.

INDUSTRY

Some of the minerals found are limestone, slate, dolomite, building stone, road metals, china clay and marble. However occurrence of graphite and quartezites has been reported at several places in the state.

[2]As on 1 January 1980.

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

The major industries are cement, sugar, paper, cotton textiles, glassware, brassware, cycles, tractors, motor cycles, time-pieces, automobile tyres and tubes, sanitaryware, television sets, steel tubes, hand tools, cotton yarn, refrigerators, vanaspati ghee and canvas shoes etc. A factory of the central government undertaking the Hindustan Machine Tools, which is producing tractors, is located at Pinjore.

IRRIGATION AND POWER

Haryana is beneficiary of the multipurpose projects on rivers Sutlej and Beas, where it shares the benefits with Punjab and Rajasthan. The major irrigation projects of the state include the Western Yamuna Canal, the Bhakra Canal System and the Gurgaon Canal. The state has completed lift irrigation schemes like Jui, Loharu and Sewani canals. The total installed power capacity on 31 December 1979 was 1,070 mw from various hydel and thermal stations. This includes Haryana's share from Bhakra Nangal, Beas project and Indraprastha thermal power station in which Haryana is a partner state and also Haryana's own thermal power generation stations at Faridabad and Panipat. Haryana is the first state in India to achieve 100 per cent rural electrification. By March 1971, all the 6,731 villages had been electrified whereas in 1951 not a single village had electricity. For irrigation, two lakhs pumpsets/tubewells had been energised by 31 December 1979 as against 743 in 1956.

GOVERNMENT

Governor : G. D. Tapase

Council of Ministers[1]

Chief Minister : Bhajan Lal

Cabinet Ministers : Balwant Rai Tayal, Mehar Singh, Gajraj Nagar, Jagan Nath, Tara Singh, Khurshed Ahmad, Bir Singh, Sher Singh, Ram Pal Singh, Shiv Ram, Ram Narain, Lall Singh, Sardar Khan, Devinder Sharma and Prem Singh.

Chief Parliamentary Secretary : Smt Shanti Devi

Legislative Assembly[1]

Speaker : Col. Rao Ram Singh
Dy. Speaker : Kanwar Vijay Pal Singh

High Court[1]

Chief Justice : S. S. Sandhawalia
Judges : Prem Chand Jain, Satish Chandra Mital, Debi Singh Tewatia, Bhopinder Singh Dhillon, Gurnam Singh, Mela Ram Sharma, Rajendra Nath Mittal, Sukhdev Singh Sidhu, Ajit Singh Bains, Kulwant Singh Tiwana, Harbans Lal, Surinder Singh, Satya Prakash Goyal, C. S. Tiwana, J. M. Tandon, S. S. Dewan, J. V. Gupta, S. S. Kang, G. C. Mittal, I. S. Tiwana and M. M. Punchhi.

Registrar : S. S. Sodhi

Public Service Commission[1]

Chairman : Balbir Singh
Members : Braham Prakash Gupta, Rati Ram Sharma, Daulat Ram and Ram Chander Madhia.

Chief Secretary : S. D. Bhambri

[1]As on 1 March 1980.

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

AREA, POPULATION AND HEADQUARTERS OF DISTRICTS

District	*Area* (*sq km*)	*Population* (*1971 census*)	*Headquarters*
1. Hissar	6,331	11,27,525	Hissar
2. Sirsa	4,279	5,33,604	Sirsa
3. Bhiwani	5,090	7,61,953	Bhiwani
4. Gurgaon	2,726	6,56,665	Gurgaon
5. Faridabad	2,163	7,15,532	Faridabad
6. Jind	3,311	7,72,111	Jind
7. Mahendragarh	2,983	7,24,143	Narnaul
8. Ambala	3,833	10,98,405	Ambala
9. Karnal	3,725	9,88,437	Karnal
10. Kurukshetra	3,738	8,62,899	Kurukshetra
11. Rohtak	3,843	10,98,548	Rohtak
12. Sonepat	2,200	6,86,986	Sonepat

HIMACHAL PRADESH

Area : 55,673 sq km	*Population* : 34,60,434
Capital : *Simla*	*Principal languages* : Hindi and Pahari

AGRICULTURE

Agriculture and horticulture are the mainstay of Himachal Pradesh's economy as 75 per cent of its people are engaged in these pursuits. Irrigated area forms only about 16.1 per cent of the net area sown. However, the agro-climatic conditions in the state are most suitable for growing a wide variety of fruits and cash crops like seed potatoes, ginger, vegetable seeds, apples, stone fruits, etc. Stress is being laid on the development of new crops like hops, olives, figs and mushrooms. Wheat, maize and rice are the major foodcrops. The production of foodgrains during 1977-78 was 10.33 lakh tonnes as against 7.04 lakh tonnes during 1966-67, when the state was formed.

The state is gifted with a variety of agro-climatic conditions due to different elevation zones which make it an ideal region for growing many kinds of fruits. Besides apples, excellent variety of plums, peaches and apricots are also grown. The total fruit production during 1978-79 was 1.37 lakh tonnes.

Forests occupy 39.2 per cent of the area of the state. The main forest products include timber, fuel wood, gums and resin.

INDUSTRY

Important minerals of Himachal Pradesh are rock salt, slate, gypsum, limestone, barytes, dolomite and pyrites.

Himachal Pradesh is gifted with vast natural resources, cheap power and labour. The state is now gradually making steady progress towards industrialisation. The number of registered small scale industrial units at the end of 1979 was 4,640. Among the major industries are Nahan Foundry, Nahan, Rosin and Turpentine Factories at Nahan and Bilaspur in the public sector and a brewery at Solan in the private sector. Himalaya Fertilizers Ltd., another public sector undertaking commissioned in August 1975, has started commercial production of NPK balanced granulated fertilizers. Besides, a television assembly plant at Solan Electronics Complex, which was commissioned in January 1976, has already started commercial manufacturing television sets in the state. The cement plant set up by the Cement Corporation

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

of India commenced production during 1979. In the small scale sector, microscopes, watch parts, clinical and industrial thermometers, hospital and heating equipments are being manufactured.

Among the indigenous village industries are sheep-rearing, wood carving and black-smithy. To encourage industry, the Himachal Pradesh Mineral and Industrial Development Corporation, the Himachal Pradesh State Small Industries and Export Corporation, the Khadi and Village Industries Board and the Handicrafts and Handloom Corporation have been set up.

IRRIGATION AND POWER

There are no major irrigation projects in the state. A medium irrigation project likely to irrigate an area of 5,200 hectares is expected to be completed soon. Among power projects, Giri Hydel project, which is the first major project taken up by the state, was completed and went into commercial production during 1978-79. Other power projects in hand are : (i) Rukti micro-hydel scheme in Kinnaur district, (ii) Sissu micro hydel scheme in Lahaul and Spiti district, (iii) Bassi augmentation project in Mandi district, and (iv) Bhabha hydel project in Kinnaur district.

Up to March 1979, 8,329 villages out of a total of 16,916 had been electrified.

GOVERNMENT

Governor : Aminuddin Ahmed Khan

Council of Ministers[1]

Chief Minister : Thakur Ram Lal
Cabinet Ministers : Shiv Kumar and Hardyal

Legislative Assembly[1]

Speaker : Thakur Sein Negi
Dy. Speaker : Ranjit Singh Verma

High Court[1]

Chief Justice : B. B. Mishra
Judges : Hira Singh Thakur, Tilak Raj Handa, Vyom Prakash and Inder Singh.

Public Service Commission[1]

Chairman : I. C. Katoch
Member : R. C. Sharma

Chief Secretary : K. C. Pandeya

AREA, POPULATION AND HEADQUARTERS OF DISTRICTS

District	*Area* (*sq km*)	*Population* (1971 *census*)	*Headquarters*
1. Bilaspur	1,167	1,94,786	Bilaspur
2. Chamba	6,515	2,51,203	Chamba
3. Hamirpur	1,118	2,65,011	Hamirpur
4. Kangra	5,739	8,00,863	Dharamsala
5. Kinnaur	6,553	49,835	Kalpa
6. Kulu	5,503	1,92,371	Kulu
7. Lahaul Spiti	13,693	27,568	Keylong
8. Mandi	3,951	5,15,180	Mandi
9. Simla	5,131	4,19,844	Simla
10. Sirmur	2,826	2,45,033	Nahan
11. Solan	1,937	2,37,403	Solan
12. Una	1,540	2,62,337	Una

[1]As on 12 February 1980

CC-0. Agamnigam Digital Preservation Foundation, Chandigarh

JAMMU AND KASHMIR

Area : 2,22,236 sq km[1]
Capital : Srinagar (Summer)
Jammu (Winter)

Population : 46,16,632[2]
Principal languages : Kashmiri, Dogri, Gojri, Urdu, Balti, Dardiro, Pahari and Ladakhi

AGRICULTURE

The economy of Jammu and Kashmir is largely agrarian. More than 80 per cent of the population depends on agriculture for its livelihood. Main crops are rice, maize, wheat and barley. The state harvested a record crop of well over 12 lakh tonnes in 1978-79, compared to 11.24 lakh tonnes in 1977-78. Production of foodgrains in 1974-75 has been estimated at 7.78 lakh tonnes. The area under high yielding varieties increased from 3.08 lakh hectares in 1975-76 to 4 lakh hectares in 1977-78. Last year more than 25,000 hectares were covered and by the end of current year, another 11,000 hectares are being added. Horticulture has made considerable progress in recent years. Production of fruits has gone up to 4.75 lakh tonnes. Fruit exports have also shown a remarkable increase over the years.

INDUSTRY

Over 5,000 small scale industrial units are currently in production in the state, providing employment to over 27,000 skilled and unskilled workers.

Main cottage industries are carpet and shawl making, engraved carpentry and handicraft. Production in the handicrafts has gone up from Rs 7.50 crore in 1974-75 to Rs 35.32 crore in 1978-79. Of this, handicrafts worth Rs 2 crore were exported.

Among the other industries which have come up in the state are the HMT watch factory and an ancillary unit of the Indian Telephone Industries, both at Srinagar.

IRRIGATION AND POWER

Major irrigation schemes already completed are Kathua canal and Pratap canal which irrigate an area of 17,140 hectares. Under the Tawi lift irrigation scheme, which was commissioned in 1973-74, part benefits have already started accruing. The state has taken up the Ravi canal project, a major irrigation scheme to irrigate a cropped area of about 54,000 hectares.

Power generation registered an increase and stands at well over 200 mw now after the commissioning of the lower Jhelum hydel project. Other power projects under different stages of implementation are Salal hydel project and Karrah micro hydel scheme.

Important power schemes implemented since 1947 are the Gander-Chenani, Kalakot and Upper Sind.

The power supply system in the Valley has been linked with that of northern India with the commissioning of the high voltage transmission lines between Srinagar and Pathankot in 1974.

[1]Includes area under illegal occupation of Pakistan and China.
[2]Excludes population of area under the illegal occupation of Pakistan and China.

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

A total of 4,500 villages have been electrified as compared to nil in 1951.

GOVERNMENT

Governor : L. K. Jha

Council of Ministers[1]

Chief Minister : Sheikh Mohammad Abdullah
Cabinet Ministers : D. D. Thakur, G. M. Shah, M. K. Tickoo and G. N. Kochak
Ministers of State : G. M. Bhadrawahi, Ghulam Qadir Mir, Harbhajan Singh, Bashir Ahmed, M. A. Khan, Mohammad Shafi, Parmanand and Tilak Raj Attri.
Deputy Ministers : B. A. Kichloo, Ghulam Ahmed Ganai, Ghulam Din Shah, Habib Ullah, Abdul Rashid Shaheen, Hissam Ud-Din Bandey, Dilawar Mir, Mohammad Hussain and P. N. Raju.

Legislative Council[1]

Chairman : Hakim Habib Ullah

Legislative Assembly[1]

Speaker : Malik Mohi-ud-Din
Dy. Speaker : Janak Raj Gupta

High Court[1]

Chief Justice : Mufti Baha-ud-Din Farooqi
Judges : A. S. Anand, G. M. Mir and I. K. Kotwal.

Public Service Commission[1]

Chairman : Chaudhary Bharat Bhushan
Members : Nazir Ahmed Khan, Pushkar Nath Kaul, Sajida Zamir Ahmed and Ghulam Nabi Drabu.

Chief Secretary : S. M. Aga

AREA, POPULATION AND HEADQUARTERS OF DISTRICTS

District	*Area (sq km)*	*Population (1971 census)*	*Headquarters*
1. Anantnag (Kashmir South)	5,382	8,32,280	Anantnag
2. Baramula (Kashmir North)	7,458	7,75,724	Baramula
3. Doda	11,691	3,42,220	Doda
4. Jammu	3,165	7,31,743	Jammu
5. Kathua	2,651	2,74,671	Kathua
6. Ladakh	95,876[2]	1,05,291	Leh
7. Poonch	1,658	1,70,787	Poonch
8. Rajounrl	2,681	2,17,373	Rajouri
9. Srinagar	3,013	8,27,697	Srinagar
10. Udhampur	4,549	3,38,846	Udhampur
11. Mirpur[3]	84,112	N.A.	N.A.
12. Muzaffarabad[3]			
13. Gilgit Agency[3]			
14. Hunza[3]			

[1]As on 7 March 1980.
[2]Includes area under the illegal occupation of China.
[3]Four districts (Sl. Nos. 11 to 14) are under the illegal occupation of Pakistan.
N.A. : Not available.

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

KARNATAKA

Area : 1,91,773 sq km
Capital : Bangalore
Population : 2,92,99,014
Principal language : Kannada

AGRICULTURE

Karnataka is predominantly agricultural. Of the cultivated area of 18.07 lakh hectares, 18 per cent is irrigated. Major food crops are rice, ragi, jowar, wheat, millets and pulses. The main cash crops are sugarcane, cotton, oilseeds, tobacco, coconut, arecanut, coffee, cashew, cardamom, pepper, organes and grapes. Production of foodgrains during 1977 was 64.45 lakh tonnes, sugarcane 104 lakh tonnes, oilseeds 9 lakh tonnes, cotton 9 lakh bales and pulses 5.41 tonnes.

Forests cover 15.2 per cent of the area of the state. High quality timber, sandalwood, eucalyptus, teakwood and bamboo are major forest products. Other forest products are high quality rosewood, softwood suitable for industrial purposes, and other valuable timbers.

INDUSTRY

The state is rich in mineral resources. Important among them are high grade iron ore, copper, manganese, chromite and china clay. Karnataka is the only state where gold mining is carried on. There are a number of big industries. Machine tools, aircraft, electronic products, watches and telecommunication equipment are some of the items produced. Important central government undertakings engaged in the production of these items are Hindustan Aeronautics, Hindustan Machine Tools, Bharat Electronics, Indian Telephone Industries, Bharat Earth Movers and National Aeronautical Laboratory. The State-owned Viswesvaraya Iron & Steel Ltd., Bhadravathi, produces special steel and alloy steel with a rated capacity of 77,000 tonnes annually. Kudremukh Iron Ore Project is another major development project of the state. Other flourishing industries are textiles, sugar, soap, chemical and pharmaceutical goods, fertilizer, paper, cement, glass, ceramics, porcelain and electrical goods.

Karnataka accounts for 85 per cent of the raw silk produced in the country. Apart from silk, its sandal soap and sandal oil are well known in world markets.

IRRIGATION AND POWER

Karnataka has two large river basins, those of Krishna and Cauvery, besides a number of other rivers used both for irrigation and power generation. The important irrigation schemes are Tungabhadra, Ghataprabha, Malaprabha, Upper Krishna, Bhadra, Harangi, Kabini Hemavathi and Bennethora projects.

The major power projects are Sharavathi hydro-electric project, Shivasamudram hydro-electric project and the power project on Kali river, now under construction. The installed power capacity was 1,055.7 mw The number of electrified villages stood at 20,000 at the end of 1977. For irrigation, 2,35,000 tube-wells had been energised.

GOVERNMENT

Governor : Govind Narain

Council of Ministers[1]

Chief Minister : R. Gundu Rao
Cabinet Ministers : S. Bangarappa, Veerappa Moily, Y. Ramakrishna, G. B. Shankar Rao, A. B. Jakanur, A. K. A. Samad, Dharm Singh, Begane Ramiah, C. M. Ibrahim, M. M. J. Sadyojatha.

[1]As on 26 June 1980.

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

Ministers of State : Smt. Manorama Madhwaraj, D. B. Pawar, Smt Renuka Rajendran, K. Yenkatappa and Sudhendra Kasbe.

Legislative Council[3]

Chairman : Smt. Basavarajesweri
Deputy Chairman : V. S. Krishna Iyer

Legislative Assembly[3]

Speaker : P. Venkataramana
Deputy Speaker : Smt Sumati Madiman

High Court[2]

Chief Justice : D. M. Chandrashekhar
Judges : K. Bhimaiah, V. S. Malimath, S. R. Range Gowda, E. S. Venkataramaiah, K. Jagannatha Shetty, M. S. Nesargi, M. K. Srinivasa Iyengar, M. N. Venkatachalaiah, M. Rama Jois, N. Venkatachala, K. S. Puttaswamy, P. P. Bopanna, N. R. Kudoor, G. N. Sabhahit, N. D. Venkatesh, M. P. Chandrakantha Raj Urs and M. S. Patil.

Public Service Commission[2]

Chairman : G. Duggappa
Members : H. L. Nagegowda, A. B. Mariyappa, B. P. Mallaraj Urs, H. Maharudraiah, B. T. Sansur and S. H. Ahmed.

Chief Secretary : N. Narasimha Rao

AREA, POPULATION AND HEADQUARTERS OF DISTRICTS

District	*Area* (sq km)	*Population* (1971 census)	*Headquarters*
1. Bangalore	8,003	33,65,515	Bangalore
2. Belgaum	13,410	24,23,342	Belgaum
3. Bellary	9,898	11,22,686	Bellary
4. Bidar	5,451	8,24,059	Bidar
5. Bijapur	17,056	19,85,591	Bijapur
6. Chickmagalur	7,199	7,36,647	Chickmagalur
7. Chitradurga	10,852	13,97,456	Chitradurga
8. Coorg	4,104	13,78,291	Mercara
9. Dharwar	13,749	23,42,213	Dharwar
10. Gulbarga	16,224	17,39,220	Gulbarga
11. Hassan	6,823	11,02,370	Hassan
12. Kolar	8,223	15,16,646	Kolar
13. Mandya	4,958	11,54,374	Mandya
14. Mysore	11,947	20,77,238	Mysore
15. North Kanara	10,276	8,49,105	Karwar
16. Raichur	14,005	14,15,740	Raichur
17. Shimoga	10,548	13,01,485	Shimoga
18. South Kanara	8,441	19,39,315	Mangalore
19. Tumkur	10,606	16,27,721	Tumkur

KERALA

Area : 38,864 sq km — *Population* : 2,13,47,375
Capital : *Dispur (Temporary)* — *Principal language* : Assamese

AGRICULTURE

Irrigated cropped area forms 12.71 per cent of the total cropped area in Kerala. The state has abundance of cash crops. Cashewnut, arecanut, coconut, cotton, oilseeds, pepper, sugarcane, rubber, coffee, tea, ginger and cardamom are grown extensively. Rice and tapioca are important food crops. Production of rice was 12.95 lakh tonnes

[2] As on 17 November 1978.
[3] As on 15 September 1980.

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

in 1977-78 as against 12.54 lakh tonnes in 1976-77. The production of coffee showed an increase of 8.4 per cent in 1977-78 over 1976-77.

Forests occupy 27.83 per cent of the area of the state. The forest wealth consists of some well-known varieties of timber, such as, teak, blackwood, ebony, softwood and rosewood which are in great demand abroad and fetch a high price. The State Forest Development Corporation undertakes a scheme of raising plantations, such as eucalyptus and softwood required for various wood-based industries. The state contributes a major share of sea-fish production of the country. In 1977-78, 342 lakh tonnes of fish was netted. During 1977-78, the export of marine products fetched Rs 77.45 crores in foreign exchange.

INDUSTRY

Important minerals found in the state are limenite, rutile, monazite, zircon, sillimanite and clays, quartz sand and lime shell.

Important industries are coir, cashew, rubber, tea, ceramics, electrical and electronic appliances, telephone cables, transformers, bricks and tiles, drugs and chemicals, general engineering, plywood, splints and veneers, beedi and cigar, soaps, oils and fertilizers.

In recent years, a number of manufacturing units have sprung up for producing precision instruments, machine tools, petroleum and petroleum products, fertilizers and allied products, paints, aluminium, communication cables, rubber, rayon, pulp, paper, plywood, scooter, glass and non-ferrous metals.

Principal export products are cashew-nut, tea and coffee, pepper and other spices, lemongrass oil, seafoods, rosewood, coir and coir products and rubber products.

The Kerala State Industrial Development Corporation and Kerala Financial Corporation provide financial assistance to private industries while the Plantation Corporation of Kerala has undertaken large scale expansion of rubber and oil plantations.

IRRIGATION AND POWER

Major irrigation projects implemented since 1947 are Chalakudy, Peechi, Malampuzha, Neyyar, Pothundy, Gayathri Walayar, Vazhani, Mangalam, and Cheerakuzhy besides the ongoing projects at Kallada, Pamba, Periyar Valley, Chitturpuzha, Kanhirampuzha, Kuttiadi, Pazhassi, Muvattupuzha, Chimony, Attapady, Karapuzha, Meenachil and Idamalayar. Important power projects are Pallivasal, Sengulam, Neriamangalam, Panniar, Peringalkuthu, Sholayar Sabarigiri, Kuttiyadi and Idukki.

Heavy rainfall and a large number of swift flowing rivers and streams provide considerable potential for power generation. The total installed capacity in 1977-78 was 1,011.5 mw from various hydel stations. The per capita consumption of power rose from 88.45 units in 1976-77 to 96.47 units in 1977-78.

GOVERNMENT

Governor : Jothi Vencatachellum

Council of Ministers[1]

Chief Minister : E. K. Nayanar
Cabinet Ministers : Smt K. R. Gouri, M. K. Krishnan, T. K. Ramakrishnan, P. C. Chacko, A. C. Shanmukha Das, Aryadan Mohammed, Vakkom Purushothaman, P. S. Sreenivasan, E. Chandrasekharan

[1]As on 8 February 1980.

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

Nair, A. Subba Rao, K. M. Mani, Lonappan Nambadan, Baby John, R. S. Unni, P. M. Abubacker and R. Balakrishna Pillai.

Legislative Assembly[1]

Speaker : Vacant.
Dy. Speaker : Vacant.

High Court[1]

Chief Justice : V. Balakrishnan Eradi
Judges : P. Subramanian Potti, P. Narayana Pillai, N. D. P. Namboodripad, V. Khalid, G. Viswanatha Iyer, K. Bhaskaran, George Abraham Vadakkel, T. Chandrasekhara Menon, Km. P. Janaki Amma, K. K. Narendran, G. Balagangadharan Nair and S. K. Khader.
Additional Judges : T. Kochu Thomman and M. P. Menon.
Chairman : T. M. Savankutty

Public Service Commission[1]

Members : N. Ramachandran, Thirunalloor Karunakaran, E. P. Antony, Achuth Raj Meloth, K. V. Kumaran and M. C. Cyriac.
Chief Secretary : G. Bhaskaran Nair.

Area, Population and Headquarters of Districts

District	*Area (sq km)*	*Population (1971 census)*	*Headquarters*
1. Alleppery	1,884	21,25,722	Alleppey
2. Cannanore	5,706	23,65,164	Cannanore
3. Ernakulam	2,377	21,63,776	Ernakulam
4. Idukki	5,087	7,65,668	Idukki
5. Kottayam	2,196	15,39,030	Kottayam
6. Kozhikode	3,729	21,06,249	Kozhikode
7. Malappuram	3,638	18,56,362	Malappuram
8. Palghat	4,400	16,86,342	Pailghat
9. Quilon	4,623	24,12,821	Quilon
10. Trichur	3,032	21,28,797	Trichur
11. Trivandrum	2,182	21,98,606	Trivandrum

MADHYA PRADESH

Area : 4,42,841 sq km
Capital : Bhopal
Population : 4,16,54,119
Principal language : Hindi

AGRICULTURE

The economy of Madhya Pradesh is agriculture-based. Nearly 83 per cent of the population lives in villages but only about 37.3 per cent of them are economically active. Over 42 per cent of the land area is cultivable, of which 11.4 per cent is irrigated. The main food crops are jowar, wheat, rice and gram. Important among the commercial crops are oilseeds, cotton and sugarcane. The production of food-grains was 1.20 crore tonnes in 1975-76 as compared to 47 lakh tonnes in 1951. The production of sugarcane and oilseeds was about 1.7 and 6.04 lakh tonnes respectively during 1975-76. During the same period, the production of cotton was 2.99 lakh bales.

Forests cover nearly 30 per cent of the total area of the state. The forests are chiefly of sal, babul, salai, dhavra, tendu, mahwa, teek, anjam and harra. They are also the chief source of best quality teak.

[1]As on 8 February 1980.

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

INDUSTRY

The south-eastern and eastern areas of the state are rich in minerals. Coal, iron ore, limestone, dolomite, bauxite, copper phosphorite, felspar, asbestos, diamond and manganese ore are the principal deposits.

The major industries established in various parts of the state are : the steel plant at Bhilai, the Bharat Heavy Electricals at Bhopal, the aluminium plant at Korba, the security paper mills at Hoshangabad, the currency printing press at Dewas, the newsprint mill at Nepanagar, Orient Paper Mill at Amlai and Alkoloid factory, Neemuch, cement factories at Kymore, Jamul, Banmore, Satna, Tieda and Mandhar, Vehicle Factory, Ordnance Factory and Gun Carriage Factory and Post and Telegraph Workshop, Jabalpur. There are in all 23 textile mills in the state, several of them are natonalised. The number of heavy and medium industries in the state is 178 and the number of small scale industries in production is 25,400. Other industries include potteries, sugar mills, straw board mills, refractories, textile machinery, steel casting and rerolling industrial gases, synthetics and drugs, biscuit manufacturing, engineering tools, mini steel plants, chemical fertilizer, solvent extraction plants, rayon and art silk. Thirty-six out of forty-five districts in the state are categorised as industrially backward districts.

IRRIGATION AND POWER

Important irrigation projects of Madhya Pradesh are Chambal, Tawa, Barna, Hasdeo R.B.C., Mahanadi Reservoir, Bargi, Narmadasagar, Bansagar, Hasdeo-Bango, Upper Waingaṅga and Madikheda on Sindh. Some projects like Chambal, Hasdeo RBC, Barna Ravishankar Sagar, Pairi and Sindh diversion with a total irrigation potential of about 5 lakh hectares, were recently completed. Under medium and minor irrigation programme, work is in progress on 76 medium and 2,078 minor irrigation projects with a total irrigation potential of 11.70 lakh hectares. A special irrigation development programme launched in tribal areas of the state is in progress. Madhya Pradesh has good potential of hydro-electric power generation. With the commissioning of one unit of 200 mw capacity at Sarni Power House in June 1979, the total installed generation capacity in the state as on 30 November 1979 has reached 1,315.5 mw of which 193 mw was from hydel stations.

A total of 21,050 villages have been electrified as at the end of November 1979 under the rural electrification programme.

GOVERNMENT

Governor : Bhagwat Dayal Sharma

Council of Ministers[1]

Chief Minister : Arjun Singh.
Cabinet Ministers : S. N. Mushran, Kum. Vimla Verma, Krishanapal Singh, Sriniwas Tiwari, Madhavlal Dube, Jhumklal Bhendia, Ved Ram, Dr Tumanlal and Suresh Seth.
Ministers of State : Chandra Prabhash Shekhar, Muni Prasad Shukla, Rewanath Choure, Digvijay Singh, Mankuram Sodi, Balkavi Bairagi, Bhawar Singh Porte, Hazi Inayat Khan, Kanhaiya Lal Sharma, Bhawanilal Verma, Bilasins Ekka, Tara Singh Viyogi, Nathuram Ahirawar and Harjarilal Raghuvanshi.

[1]As on 13 June 1980.

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

Legislative Assembly[3]

Speaker : Yagadatta Sharma
Deputy Speaker : Vacant

High Court[2]

Chief Justice : Guru Prasanna Singh.
Judges : Goverdhanlal Jamnalal Oza, Shyam Sunder Ram Krishnaji Vyas, Krishna Kumar Dube, Navin Chandra Dwivedi, Jagdish Sharan Verma, Gangadhar Ganesh Sohni, Manohar Lal Malik, Roshan Lal Murab, Ummaidlal Nandlal Bachavat, Chaitanya Prakash Sen, Shyam Swaroop Sharma, Padmakar Dinkar Mulye, Jagannath Prasad Bajpai, Anand Ramchandra Navkar, Sempatraj Jagraj Surana, Hargovind Mishra, Chandra Pal Singh, Ram Krishana Vijayvargiya and Bipin Chandra Verma.

Additional Judges : Shashi Kant Seth, Faizam Uddin, Ramesh Chandra Shrivastava, Manohar Durga, Shankar Bhatt and Koushalendra Nath Shukla.

Public Service Commission[2]

Chairman : N. Sundaram
Members : Ram Beharilal, Bharat Chandra Kabra and V. S. Keshar.

Area, Population and Headquarters of Districts

District	*Area* (*sq km*)	*Population* (1971 *census*)	*Headquarters*
1. Balaghat	9,245	9,77,583	Balaghat
2. Bastar	39,060	15,15,956	Jagdalpur
3. Betul	10,061	7,36,196	Betul
4. Bhind	4,467	7,93,955	Bhind
5. Bilaspur	19,905	24,40,962	Bilaspur
6. Chhatarpur	8,690	7,12,385	Chhatarpur
7. Chhindwara	11,824	9,89,413	Chhindwara
8. Damoh	7,301	5,73,263	Damoh
9. Datia	2,034	2,55,267	Datia
10. Dewas	7,014	5,94,336	Dewas
11. Dhar	8,149	8,42,400	Dhar
12. Durg	19,670	24,61,901	Durg
13. East Nimar	10,705	8,79,331	Khandwa
14. Guna	11,017	7,83,748	Guna
15. Gwalior	5,213	8,58,005	Gwalior
16. Hoshangabad	10,016	8,05,870	Hoshangabad
17. Indore	3,910	10,25,150	Indore
18. Jabalpur	10,164	16,86,030	Jabalpur
19. Jhabua	6,781	6,67,811	Jhabua
20. Mandsaur	9,726	9,61,522	Mandsaur
21. Mandla	13,257	8,73,577	Mandla
22. Morena	11,586	9,85,338	Morena
23. Narsinhapur	5,138	5,19,270	Narsinhapur
24. Panna	7,122	4,29,067	Panna
25. Raigarh	12,910	12,78,705	Raigarh
26. Raipur	21,251	26,13,531	Raipur
27. Raisen	8,396	5,53,026	Raisen
28. Rajgarh	6,163	6,44,346	Rajgarh

[2]As on 21 February 1980.
[3]As on 6 August 1980.

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

District	*Area (sq km)*	*Population (1971 census)*	*Headquarters*
29. Ratlam	4,859	6,26,534	Ratlam
30. Rewa	6,315	9,77,894	Rewa
31. Sagar	10,246	10,62,291	Sagar
32. Satna	7,495	9,13,531	Satna
33. Sehore	9,015	10,84,933	Sehore
34. Seoni	8,752	6,68,352	Seoni
35. Shahdol	14,028	10,29,839	Shahdol
36. Shajapur	6,201	6,78,359	Shajapur
37. Shivpuri	10,285	6,76,567	Shivpuri
38. Sidhi	10,532	6,76,786	Sidhi
39. Surguja	22,337	13,26,439	Ambikapur
40. Tikamgarh	5,047	5,68,885	Tikamgarh
41. Ujjain	6,081	8,62,516	Ujjain
42. Vidisha	7,433	6,58,427	Vidisha
43. West Nimar	13,441	12,84,812	Khargone
44. Bhopal	2,763	5,72,169	Bhopal
45. Rajnandgaon	11,003	9,92,774	Rajnandgaon

MAHARASHTRA

Area : 3,07,762 sq km
Capital : Bombay
Population : 5,04,12,235
Principal language : Marathi

AGRICULTURE

About 70 per cent of the people in Maharashtra depend on agriculture. Irrigated area forms only about 11.5 per cent of the total cropped area. The principal food crops are wheat, rice, jowar, maize, bajra and pulses. Production of foodgrains during 1979-80 totalled 104.75 lakh tonnes. Important cash crops are cotton, sugarcane, groundnut and tobacco and their production during 1979-80 was : sugarcane (gur) 16.8 lakh tonnes, cotton 15.60 lakh bales, groundnut 5.06 lakh tonnes of pods and tobacco 0.07 lakh tonnes in 1978-79. Of the total area, forests occupy 20.1 per cent.

INDUSTRY

Maharashtra is endowed with sizeable deposits of iron ore, coal, manganese ore, bauxite and limestone. Manganese ore in the Vidarbha-region has enabled the state to develop ferro-manganese industry. An electro-smelting factory has been set up in Chandrapur district.

There are several large-scale industries including textiles, ginning and pressing, silk, rayon, synthetic fabrics and vegetable products. Nashik, Aurangabad, Nagpur, Roha, Tarapur and Ahmednagar have come up as new industrial growth centres. Most of the textile mills are located in Bombay. Maharashtra is also a major sugar-producing state. Important chemical industries include nitrogenous fertilizers, superphosphates, petro-chemicals, drugs and pharmaceuticals and photographic chemicals. Emergence of oil fields at Bombay High and Bassein North and the new fertiliser unit at Thal—Vaishet near Alibag have given further boost to the petro-chemical industry in the state. Development of minerals in Vidarbha and Ratnagiri and launching of deep sea-fishing programme has opened new vistas for the development of marine industries and fish processing units in the coastal area of the state.

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

Various types of engineering goods, such as, machine tools, steel and malleable iron castings, welding electrode ball-bearings and agricultural implements are manufactured for domestic consumption as well as for export. Maharashtra leads in the motion picture industry. It also leads in the sophisticated field of electronics. Santacruz Electronics Export Processing Zone, a free trade zone for 100 per cent export of electronic goods, has started functioning near the airport at Bombay. A Rs 2-crore project to manufacture industrial files is being set up at Ratnagiri. A number of defence and public sector industries are also located in the state.

IRRIGATION AND POWER

Since 1947, nine major irrigation projects viz. Vir, Ghod, Girna, Purna, Pus, Bagh, Itiadoh, Kal and Tulshi have been completed. Irrigation potential on a large scale has been created on Mula, Upper Godavari, Jayakwadi stage I projects and these projects are expected to be completed during the Sixth Plan period. In addition, partial potential on six more major projects viz, Kukadi, Bhima, Khadakwasla, Krishna, Jayakwadi stage II and Pench has been created. During the Plan era of 27 years, 89 medium projects have been completed. Further partial potential on 23 medium projects has been created.

The major hydro-thermal and nuclear power projects are Koyna, Tarapur, Tata Hydro, Nashik, Koradi, Bhusaval, Paras and Khaparkheda. The derated installed capacity is 3,106 mw. Maharashtra had only 38 electrified villages in 1951, the number increased to 24,544 by November 1979. As many as 5,68,192 agricultural pumps have been energised by November 1979 compared to 142 in 1951.

GOVERNMENT

Governor : Sadiq Ali.

Council of Ministers[1]

Chief Minister : A. R. Antulay
Cabinet Ministers : Smt Shalinitai Patil, Ramrao Adik, Jawaharlal Dadra, Jayantrao Tilak, Baburao Kale, Dr Baliram Hiray, B. J. Khatal, Shivajirao Patil Nilangekar, B. A. Bhosle, B. M. Gaikwad and Smt Premila Bhanushankar Yagnik.
Ministers of State : Abhaysinh Bhosale, Khan Mohammed Azhar Hussain, S. B. Doetale, Satish Chaturvedi, D. S. Kamale, Smt Talabai Narsinh Vartak, S. N. Desai, Haribhan J. Naik and Chandrakant Tripathi.

Legislative Council[2]

Chairman : R. S. Govai
Deputy Chairman : Vacant

Legislative Assembly[2]

Speaker : Sharad Dighe
Deputy Speaker : S. C. Jagtap

High Court[3]

Chief Justice : B. N. Deshmukh.
Judges : Venkat Shrinivas Deshpande, Dinshah Pirosha Madon, Madhukar Narhar Chandurkar, M. H. Kania, S. K. Desai, Bhaskar Annaji Masodkar, Chandrashekhar Shankar Dharmadhikari, Prakash Shivlal Shah, Devidatta Mangesh Rege, Reghunandan Lal Aggarwal, Bakhtavar Lentin, Parshuram B. Sawant, Bhalchandra Chintaman Gadgil, Manmohan Dashrath Kambli, Abbasali Asgarali Ginwala, Raghavendra Anantacharya Jahagirdhar, S. C. Pratap, M. P. Kanade,

[1]As on 14 June 1980.
[2]As on 12 March 1980.
[3]As on 6 August 1980.

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

S. P. Bharucha, R. D. Tulpule, V. V. Joshi, M. L. Pendse, S. P. Kurdukar, D. N. Mehta, V. S. Kotwal, M. S. Jamdai, M. R. Waikar, S. G. Manohar, D. P. Deshpande, R. S. Padhye, V. A. Mohta, B. J. Rele, N. K. Parekh, R. S. Bhonsale, A. N. Mody, P. G. Palshikar and S. W. Puranik.

Public Service Commission[2]

Chairman : K. G. Deshmukh.
Members : B. A. Ansari, N. S. Devdhar, M. G. Gavai, P. G. Patil and Dr M. V. Suryawanshi.

Chief Secretary : P. G. Gavai.

AREA, POPULATION AND HEADQUARTERS OF DISTRICTS

District	*Area* (*sq km*)	*Population* (1971 *census*)	*Headquarters*
1. Ahmednagar	17,035	22,69,117	Ahmednagar
2. Akola	10,567	15,01,478	Akola
3. Amravati	12,210	15,41,209	Amravati
4. Aurangabad	16,200	19,71,006	Aurangabad
5. Bhandara	9,214	15,85,580	Bhandara
6. Beed	11,227	12,86,121	Beed
7. Buldana	9,745	12,62,978	Buldana
8. Chandrapur	25,641	16,40,137	Chandrapur
9. Dhule	13,143	16,62,181	Dhule
10. Greater Bombay	603	59,70,575	Bombay
11. Jalgaon	11,771	21,23,121	Jalgaon
12. Kulaba	7,198	12,63,003	Alibagh
13. Kolhapur	8,059	20,48,049	Kolhapur
14. Nagpur	9,928	19,42,688	Nagpur
15. Nanded	10,492	13,97,762	Nanded
16. Nasik	15,582	23,69,221	Nasik
17. Usmanabad	14,117	18,96,687	Usmanbad
18. Parbhani	12,489	15,06,771	Parbhani
19. Pune	15,640	31,78,029	Pune
20. Ratanagiri	13,040	19,90,583	Ratnagiri
21. Sangli	8,563	15,39,820	Sangli
22. Satara	10,492	17,27,376	Satara
23. Solapur	15,021	22,53,840	Solapur
24. Thane	9,553	22,81,664	Thane
25. Wardha	6,307	7,79,562	Wardha
26. Yavatmal	13,925	14,23,677	Yavatmal

MANIPUR

Area : 22,356 sq km
Capital : Imphal
Population : 10,72,753
Principal language : Manipuri

AGRICULTURE

The main occupation of 66 per cent of the population of Manipur is agriculture. Nearly 92 per cent of the total land area is hilly and covered with forests. Forest reserves are being developed by planting better species of timber. Bamboo is found in large quantities. In the Jiri and Barak river drainage area alone, bamboos cover an

[2]As on 12 March 1980.

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

estimated area of 2,585 sq km yielding 3,00,000 tonnes annually. Main crop is paddy, while wheat and maize are also grown in some areas. Orchards are also being set up. During 1977-78, the kharif production of paddy increased to 3.94 lakh tonnes as against 2.88 lakh tonnes in 1976-77.

INDUSTRY

The state has no large scale industry. Handloom weaving is the largest single cottage industry. Other cottage industries are sericulture, bamboo and cane articles, carpentry, blacksmithy, leather goods, edible oil crushing, rice milling, gur and khandsari.

To accelerate the development of small scale industries, an industrial advisory board has been set up and the jurisdiction of Assam Financial Corporation extended to Manipur. At Takyelpat near Imphal, an industrial estate is being set up.

IRRIGATION AND POWER

Irrigation is done through minor irrigation works by constructing weirs across running streams for better distribution of water during the monsoons.

Loktak is the only major power project in the state. The total installed capacity of power both hydel and thermal, in 1976-77 was 10,338 kw. Manipur had only nine electrified villages before 1951; the number increased to 274 during 1978-79.

GOVERNMENT

Governor : L. P. Singh

Council of Ministers[1]

Chief Minister : R. K. Dorendra Singh
Cabinet Ministers : Rishang Keishing and Ngurdinglien
Ministers of State : Helaluddin Khan, Holkholet Khongsai, Devendra Singh, Th. Choaba Singh, Th. Krishna Singh.

Legislative Assembly[1]

Speaker : Y. Yaima Singh.
Dy. Speaker : H. Lokhon Singh.

High Court[1]

The jurisdiction of Gauhati High Court extends over Manipur. For list of judges, see under Assam.

Public Service Commission[1]

Chairman : D. Krishna Ayaar.
Members : L. Solomon and K. Gourakishore Singh.

Chief Secretary : L. B. Thanga

AREA, POPULATION AND HEADQUARTERS OF DISTRICTS

District	*Area* (*sq km*)	*Population* (1971 *census*)	*Headquarters*
1. Manipur Central	2,230	7,24,537	Imphal
2. Manipur East	4,409	62,229	Ukhrul
3. Manipur North	3,417	1,04,175	Senapati
4. Manipur South	4,581	98,114	Churachandpur
5. Manipur West	4,344	44,975	Tamenglong
6. Tengnoupal	3,375	38,723	Chandel

[1]As on 21 March 1980.

CC-0. Agamnigam Digital Preservation Foundation, Chandigarh

MEGHALAYA

Area : 22,489 sq km
Capital : Shillong
Population : 10,11,699
Principal languages : Khasi, Jaintia and Garo

AGRICULTURE

Over 80 per cent of the people of Meghalaya are engaged in agricultural pursuits. Irrigated area is about 27 per cent of the cultivated area. The principal crops are potato, *tezpata,* sugarcane, oilseeds, cotton, jute, *mesta* and arecanut. Selected areas have been earmarked for growing high-yielding varieties of paddy, wheat and maize. In the Khasi and Jaintia Hills districts fruits and vegetables are also grown and special programmes have been undertaken to develop horticulture. The production of foodgrains is around 1,30,000 tonnes annually. The annual production of cash crops is estimated to be : jute 50,000 bales, potato 71,000 tonnes and tapioca 5,000 tonnes. The state is making good progress in horticulture. It produces about 70,000 tonnes of pineapples, 80,000 tonnes of oranges and 35,000 tonnes of bananas annually.

Forests and forest-products are the chief resources of the state. Economic plantations of industrial and commercial use are being undertaken extensively.

INDUSTRY

The mineral wealth of the Khasi Hills, Jaintia Hills and Garo Hills districts includes coal, sillimanite, limestone, dolomite, fire clay, felspar, quartz and glass sand. Ninety-five per cent of India's total output of sillimanite is produced in the Khasi Hills district. The Garo Hills district has deposits of coal, limestone, fire clay and light coloured sand-stone. The estimated reserves of coal in the state are about 12,000 lakh tonnes and limestone 21,000 lakh tonnes.

The factory at Cherrapunjee produces 590 tonnes of cement every day and its capacity is being expanded to 930 tonnes a day. A timber treatment plant is being set up at Darugiri in Garo Hills. Several mineral-based industries are coming up. A plywood factory and a beverages factory have already been set up.

IRRIGATION AND POWER

There are at present four hydel projects with a total installed capacity of 125.2 mw. The state had electrified about 474 villages up to March 1979.

GOVERNMENT

Governor : L. P. Singh

Council of Ministers[1]

Chief Minister : B. B. Lyngdoh
Deputy Chief Minister : S. D. Khongwir
Cabinet Ministers : Maham Singh, Humphrey Hadem, Salesng Marak, Dr. B. Pakem, Peter Garnette Marbaniang, Fuller Lyngdoh, D. D. Lapang, P. G. Momin and M. Reidson Momin.
Ministers of State : H. B. Dan and P. Sangma.

Legislative Assembly[1]

Speaker : Winstone Syiemiong.
Dy. Speaker : Singjan Sangma.

High Court[1]

The Jurisdiction of Gauhati High Court extends over Meghalaya. For list of Judges, see under Assam.

[1]As on 1 February 1980.

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

Public Service Commission[1]

Chairman : Dr O. Lyngdoh.
Members : Smt F. Marak and O. Laloo.

Chief Secretary : Ramesh Chandra.

AREA, POPULATION AND HEADQUARTERS OF DISTRICTS

District	*Area* (*sq km*)	*Population* (1971 *census*)	*Headquarters*
1. East Khasi Hills 2. West Khasi Hills	11,168·1	4,91,209	Shillong Nongstoin Willamnagar
3. East Garo Hills 4. West Garo Hills	8,084·0	4,06,615	Tara
5. Jaintia Hills	3,295·5	1,13,875	Jowai

Note : The total area figures of the districts will not tally with the state figures because the former represents land used and are derived from the figures supplied by the State Directorate of Land Records.

NAGALAND

Area : 16,527 sq km *Population* : 5,16,449
Capital : Kohima

AGRICULTURE Agriculture is the main occupation of 90 per cent of the population of Nagaland Rice is the only important foodgrain grown in the state. The total production of rice was 95,000 metric tonnes in 1977-78. The total area operated for cultivation is 6,80,000 hectares. The total terraced rice cultivated area with irrigation is 38,000 hectares.

Forests over 17.56 per cent of the area of the state and they contribute considerably to the revenues.

INDUSTRY There is a sugar mill with a crushing capacity of 1,200 tonnes per day at Dimapur. The Nagaland Forest Products Ltd., at Tijit has gone into production. A paper mill with a production capacity of 100 tonnes per day and a distillery unit at Dimapur are being set up. A factory for the production of decorative and commercial plywood is also coming up. Handloom and sericulture are the important cottage industries. There are six weaving-*cum*-production centres, three cottage industries-*cum*-production centres, five sericulture farms, one handicraft training-cum-production centre and three small-scale industries service centres.

IRRIGATION AND POWER Minor irrigation works in the state are mostly meant to divert small hill streamlets to irrigate valleys used for rice cultivation.

Total installed capacity of power upto date is 3.17 mw.

Out of 964 villages in Nagaland, the number of electrified villages till now is 275.

GOVERNMENT *Governor* : L. P. Singh

[1]As on 1 February 1980.

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

Council of Ministers[1]

Chief Minister : John Bosco Jasokie
Cabinet Ministers : Vamuzo, T. Kikon, Lungland, Shurhozellie, Tochi Hanso, Noke Konyak, Sentichuba Ao, Zunkum Imchunger, K. L. Chischi, M. Murry, Dr Setu Leigise, Dallenamo and Imchalamba Ao.
Minister of State : Yopiku and Chenlom.

Legislative Assembly[2]

Speaker : Vitsonei K. Angami
Dy. Speaker : Rainbow Ezung

High Court[2]

The jurisdiction of Gauhati High Court extends over Nagaland. For list of judges, see under Assam.

Chairman : Vacant
Member : Vacant

Chief Secretary : N. I. Jamir

District	*Area (sq km)*	*Population (1971 census)*	*Headquarters*
1. Kohima	n.a.	1,30,610	Kohima
2. Mokokchung	n.a.	83,852	Mokokhung
3. Mon	n.a.	64,140	Mon
4. Phek	n.a.	44,594	Phek
5. Tuensang	n.a.	1,08,763	Tuensang
6. Wokha	n.a.	38,297	Wokha
7. Zonheboto	n.a.	47,093	Zonheboto

ORISSA

Area : 1,55,782 sq km
Capital : Bhubaneswar
Population : 2,19,44,615
Principal language : Oriya

AGRICULTURE

Over 76 per cent of the people in Orissa are dependent on agriculture. Out of the gross cropped area of 82.75 lakh hectares, 15.97 lakh hectares was irrigated by the end of 1978-79. Rice, pulses, oilseeds, jute, *mesta,* sugarcane, coconut and turmeric are important crops. During 1978-79, the production of foodgrains was 56.58 lakh tonnes as against 40.75 lakh tonnes during 1976-77. The production of rice during 1978-79 was 44.02 lakh tonnes; wheat 1.1 lakh tonnes, sugarcane 2.08 lakh tonnes, oilseeds 4.27 lakh tonnes and jute 4.39 lakh bales.

Forests cover 67.92 lakh hectares or 45 per cent of the area of the state. Main forest products are *sal,* teak, rosewood, lac, tusser, silk, medical plants and *kendu* leaves. Lac, tusser and medicinal plants like nux vomica and rauwolfia serpentina are available from certain forests. Seeds of *sal,* available in abundance, have recently become an economic product of the forests. *Kendu* leaf trade has been nationalised.

[1]As on 5 June 1980.
[2]As on 11 March 1980.
n.a. Not available.

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

INDUSTRY

Orissa is a very important mineral bearing state in the country. Important minerals found in the state include iron ore, manganese ore, limestone, dolomite, chromite, non-coking coal, bauxite, graphite, china clay, nickel ore, vanadium ore, fire clay and mineral sands. The total production of minerals in 1978 was about 148 lakh tonnes.

Since Independence, 49 large industries have been set up in the state in the public and private sectors. Most of them are mineral based. Among them are the Rourkela steel plant, a pig iron plant at Barbil and a ferro-chrome plant at Jajpur Road, two ferro-manganese plants, a ferro-silicon plant and an aluminium smelter plant. The other mineral based industries are two refractory plants and two cement plants. An oxygen plant, an alloy steel casting plant and two jute twine plants have been newly set up. Two solvent extraction plants have been set up at Bhadrak and Rairangpur.

There are three large paper mills at Raigada, Choudwar and Brajarajnagar. The Hindustan Steel Ltd. has also a fertilizer plant at Rourkela. Chemical industries include a caustic soda plant and a salt manufacturing unit at Ganjam and an industrial explosives plant at Rourkela.

Other industries of importance are two large sugar plants, one at Raigada and the other at Aska, the latter in the co-operative sector; a glass works at Baranga, a heavy machine tool plant at Kansbahal, a refrigerator manufacturing unit at Choudwar, a re-rolling mill at Hirakud and three textile mills at Choudwar, Jharsuguda and Bargarh, the last one in the co-operative sector, a phosphatic fertilizer plant at Rourkela, a *sal* seed extraction unit in Mayurbhanj district and a dichromatic plant in Cuttack district.

A good number of major industrial ventures both in the state and central sectors are either under execution or in the pipeline. The central projects under execution are : fertiliser plant at Talcher, Formed Coak Plant at Talcher, heavy water plant at Talcher, Indian Rare Earth Project at Chhatrapur and wagon repairing shop at Mancheswar, near Bhubaneswar. Infrastructural facilities are being developed for aluminium complex in Koraput district, a fertiliser plant at Paradeep, second steel plant at Paradeep and ship building yard at Paradeep. The state's Industrial Development Corporation and the Industrial Promotion and Investment Corporation have also initiated a number of industrial projects.

IRRIGATION AND POWER

Irrigation facilities in the state have expanded considerably since 1947. Irrigation facilities were provided to over 14.28 lakh hectares of land through different sources, *viz.* major, medium and minor irrigation projects including lift irrigation points. By the end of Fourth Plan, irrigation benefit was provided to 7,71,420 hectares of land. By the end of 1978-79, 3,526 lift irrigation projects have been energised creating irrigation potential for 1,88,516 acres in Kharif and 1,13,109 acres in Rabi. These include 1,744 tube-wells and 1,782 river lifts. A Rs 750-crore groundwater utilisation scheme is also proposed to be taken up. By the end of July 1979, 2,67,164 wells were sunk. This created irrigation potential for 1,87,500 hectares.

The Hirakud Dam project is a multi-purpose river valley project with the objectives of power generation (270 mw), flood control navigation and irrigation. Balimela H. E. Project, Machhkund H. E. Scheme and Talcher thermal stations are the other important power projects.

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

The total installed capacity of power, both hydel and thermal, by August 1979 was 914 mw. This will be increased to 1,474 mw by 1983-84 when the three projects which are under execution will be completed. These are Talcher thermal, Rengali multi-purpose project and Upper Kolab H.E. project.

Orissa had 25 electrified villages in 1955-56; the number increased to 17,480 by the end of March 1979.

GOVERNMENT

Governor : C. M. Poonacha

Council of Ministers[1]

Chief Minister : J. B. Patnaik
Cabinet Ministers : Upendra Dixit, Kanhu Charan Lenka, Basudev Mohapatra, Gangadhar Mahapatra, Dayanidhi Naik, Raghupathi Patnaik, Rama Chandra Ulaka.
Ministers of State : Harihar Karan, Kauria Majhi, Jugalkishore Patnaik, Bhajaman Behera, Niranjan Patnaik, Basanta Kumar Biswal, Babibullah Khan, Kishore Chandra Patel, Krushna Charan Patnaik and Lalit Mohan Gandhi.

Legislative Assembly[3]

Speaker : Somnath Rath
Dy Speaker : Himansu Sekhar Padhi

High Court[2]

Chief Justice : S. K. Ray
Judges : S. Acharya, R. N. Mishra, K. B. Panda, P. K. Mohanty, N. K. Das and J. K. Mohanty.

Public Service Commission[2]

Chairman : N. K. Ray
Members : G. C. Dash, P. Pati, L. D. Mallik and C. Majhi.

Chief Secretary : S. M. Patnaik

AREA, POPULATION AND HEADQUARTERS OF DISTRICTS

District	*Area* (*sq km*)	*Population* (1971 *census*)	*Headquarters*
1. Balasore	6,394	18,30,504	Balasore
2. Boudh Khondmals	11,070	6,21,675	Phulbani
3. Bolangir	8,903	12,63,657	Bolangir
4. Cuttack	11,211	38,27,678	Cuttack
5. Dhenkanal	10,826	12,93,914	Dhenkanal
6. Ganjam	12,527	22,93,808	Chhatrapur
7. Kalahandi	11,835	11,63,859	Bhawanipatna
8. Keonjhar	8,240	9,55,514	Keonjhar
9. Koraput	27,020	20,43,281	Koraput
10. Mayurbhanj	10,412	14,34,200	Baripada
11. Puri	10,159	23,40,859	Puri
12. Sambalpur	17,570	18,44,898	Sambalpur
13. Sundargarh	9,675	10,30,758	Sundargarh

[1]As on 9 June 1980.
[2]As on 1 January 1980.
[3]As on 6 August 1980.

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

PUNJAB

Area : 50,362 sq km
Capital : Chandigarh
Population : 1,35,51,060
Principal language : Punjabi

AGRICULTURE

About 83 per cent of the total geographical area of Punjab is under cultivation. About 76 per cent of the population is engaged in agricultural pursuits. The state is surplus in foodgrains, especially wheat and rice. Other main foodgrains are maize, bajra, jowar, gram, barley and pulses. Major cash crops are oilseeds, sugarcane, tobacco, cotton and potatoes. The production of foodgrains in 1978-79 was 116 lakh tonnes as against 103.46 lakh tonnes in 1977-78.

The state launched Integrated Rural Development Programme in November 1977 which is aimed at providing gainful employment to the villagers and to revive the traditional rural industries and trades.

Forests cover an area of 2,22,476 hectares or 4 per cent of the area of the state.

INDUSTRY

Punjab is the home of small-scale industries. Sericulture, footwear, machine tools, bicycle parts, sewing machines and parts, plastic goods, pipes, nuts and bolts, wood and machine screws are some of the important smal lscale industries. On 31 March 1979, the number of important small scale units was 49,381. Punjab also produces 70 per cent of the country's woollen hosiery.

Some of the major industries established recently through the efforts of the Punjab Industrial Development Corporation are tractors, dry cell batteries, polyester fibres, nylon, automobile tyres and tubes, synthetic detergents, scooters, breweries, fertilizers, steel billets, TV sets, electronic components and precision instruments. The Nangal fertilizer factory is a major central government undertaking in the state. The centre is also setting up a naphtha-based fertilizer factory at Bhatinda.

In addition, five new projects have come up during the last two years. These are Biomedical Equipments Ltd., Records Ltd., Digital Industrial System Ltd., Electro Optical System Ltd. and Csnumer Electronic Items Ltd. Some of the bio-medical equipments are being made for the first time in the country.

IRRIGATION AND POWER

Important irrigation works, implemented since 1947, are the Bhakra Nangal Dam, Bhakra canals, Harike Barrage with a new lined canal called Sirhind Feeder and remodelling of Madhopur Headworks into a barrage. The Madhopur-Beas link was constructed to transfer the surplus waters of river Ravi to Beas. A similar project, the Sutlej-Beas link project, is in an advanced stage of construction.

The fourth unit of Guru Nanak Thermal Power Plant at Bhatinda was commissioned in January 1979. The Pong Dam on river Beas is an important hydro-electric project. The fourth unit of the Dam was commissioned in March 1979. A new thermal plant at Ropar has also been taken up. The third and fourth units at Dehar Power plant were commissioned in June and July 1979 respectively.

The total installed capacity in different fields of power development by 1978-79 was 1,385 mw. The state achieved 100 per cent electrification by May 1976. For irrigation purposes, 5,70,000 tube-wells were energised till March 1979.

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

GOVERNMENT *Governor* : Jaisukhlal Hathi

Council of Ministers[1] *Chief Minister* : Darbara Singh
Cabinet Ministers : Dr Kewal Krishan, Santokh Singh Randhawa, Kanshi Ram, Sardari Lal Kapur, Beant Singh, Jagat Ram and Harcharan Singh Ajnala.

Legislative Assembly[2] *Speaker* : Brij Bhushan Mehta
Deputy Speaker : Gulzar Singh

High Court[3] Punjab and Haryana have a common High Court. For list of judges, see under Haryana.

Public Service Commission[2] *Chairman* : Jaswant Rai Bansal
Members : Shiv Dev Singh, Onkar Singh Kalkat, Smt Santosh Choudhry and Niranjan Singh Mitha.

Chief Secretary : K. S. Narang

AREA, POPULATION AND HEADQUARTERS OF DISTRICTS

District	*Area (sq km)*	*Population (1971 census)*	*Headquarters*
1. Amritsar	5,025	18,35,500	Amritsar
2. Bhatinda	5,564	10,27,293	Bhatinda
3. Faridkot	5,746	11,51,738	Faridkot
4. Ferozepur	5,923	10,44,936	Ferozepur
5. Gurdaspur	3,557	12,29,249	Gurdaspur
6. Hoshiarpur	3,887	10,52,153	Hoshiarpur
7. Jullundur	3,396	14,54,501	Jullundur
8. Kapurthala	1,634	4,29,514	Kapurthala
9. Ludhiana	3,793	14,19,421	Ludhiana
10. Patiala	4,669	12,11,303	Patiala
11. Ropar	2,086	5,48,802	Ropar
12. Sangrur	5,096	11,47,650	Sangrur

RAJASTHAN

Area : 3,42,214 sq km *Population* : 2,57,65,806
Capital : Jaipur *Principal languages* : Rajasthani and Hindi

AGRICULTURE Total irrigated area in Rajasthan is about 29.85 lakh hectares while the sown area was about 160.60 lakh hectares in 1977-78. Agricultural production is mainly dependent on rainfall. The principal crops are jowar, bajra, maize, gram, wheat, oilseeds, cotton, sugarcane and tobacco. The total production of foodgrains in 1978-79 was 78.13 lakh tonnes out of which bajra and pulses contributed 14.52 lakh tonnes, sugarcane 21.94 lakh tonnes, oilseeds 5.56 lakh tonnes, cotton 5.72 lakh bales (each of 170 kg) and wheat 28.72 lakh tonnes.

Forests cover 34,606 sq km (estimated) of the state's area.

[1]As on 10 June 1980.
[2]As on 4 February 1980.
[3]As on 6 August 1980.

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

INDUSTRY

Rajasthan accounts for the country's entire output of lead and zinc concentrates, emeralds and garnets. Similarly, 92 per cent of India's gypsum, 90 per cent of silver ore, 75 per cent of asbestos and felspar and 20 per cent of mica are mined here. It has rich salt deposits at Sambhar and other places. Copper mines are situated at Khetri and Dariba.

Textile, rugs and woollen goods, sugar, cement, glass, sodium producing plant, oxygen and acetylene producing units, manufacture of pesticides, insecticides and dyes are some of the major industries. Other enterprises include the manufacture of caustic soda, calcium carbide, nylon and tyre cord and copper smelting. Among the important central government undertakings in the state is the Precision Instruments factory at Kota. In March 1979, there were 5,049 factories subject to the Factories Act, 1948.

Important handicrafts are marble work, woollen carpets, jewellery, embroidery, articles of leather, pottery and brass embossing.

IRRIGATION AND POWER

The major irrigation schemes implemented since 1947 are the Kota Barrage and Rana Pratap Sagar, both inter-state projects in collaboration with Madhya Pradesh. The Rajasthan Canal will be the longest in the world when completed. Steps are being taken to complete the project by 1984. It will irrigate about 11.4 lakh hectares of land in the desert districts. Besides a number of small and medium irrigation schemes, the state is benefited from Bhakra Nangal Project, Gandhi Sagar Dam and Beas Project. Mahi project is also in progress. In 1977-78, the gross irrigated area in Rajasthan was 31.66 lakh hectares.

Rajasthan has at present an installed power capacity of 871.5 mega watts. Atomic power project has also started its production. Rajasthan had only 43 electrified villages and towns in 1951; the number increased to 12,927 up to November 1979. For irrigation, 1,72,257 wells have been energised.

Antyodaya : For the economically poor, the state government launched Antyodaya Scheme on 2 October 1977. So far 2.67 lakh families have been identified and means of livelihood provided to 2.31 lakh families up to November 1979.

GOVERNMENT

Governor : Raghukul Tilak

Council of Ministers[1]

Chief Minister : Jagannath Pahadia
Cabinet Ministers : Hanuman Prasad Prabhakar, Smt Kamala Beniwal and Badri Prasad Gupta
Ministers of State : Rampal Upadhya, Smt Bhagwati Devi, Abdul Rehman Choudhary, Narender Singh Bhati and Mangilal Arya.

Legislative Assembly[2]

Speaker : Poonam Chand Bishnoi
Dy. Speaker : Vacant

High Court[3]

Chief Justice : Chand Mal Lodha
Judges : K. D. Sharma, D. P. Gupta, M. L. Shrimal, P. D. Kudal, Guman Mal Lodha, Krishna Mal Lodha and M. L. Joshi.

[1]As on 17 June 1980.
[2]As on 4 February 1980.
[3]As on 6 August 1980.

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

Additional Judges : Narendra Mohan Kasliwal, Milap Chand Jain, Suresh Chandra Agrawal, Km Kanta Bhatnagar, M. B. Sharma and S. S. Didwania.

Public Service Commission[2]

Chairman : Ram Singh
Members : H. D. Gupta, D. D. Chowhan and S. Adiyappa.

Chief Secretary[1] : G. K. Bhanot

AREA, POPULATION AND HEADQUARTERS OF DISTRICTS

District	*Area* (*sq km*)	*Population* (1971 *census*)	*Headquarters*
1. Ajmer	8,479	11,47,729	Ajmer
2 Alwar	8,382	13,91,162	Alwar
3. Banswara	5,037	6,54,586	Banswara
4. Barmer	28,387	7,74,805	Barmer
5. Bharatpur	8,093	14,90,206	Bharatpur
6. Bhilwara	10,450	10,54,890	Bhilwara
7. Bikaner	27,231	5,73,149	Bikaner
8. Bundi	5,550	4,49,021	Bundi
9. Chittorgarh	10,858	9,44,981	Chittorgarh
10. Churu	16,829	8,74,439	Churu
11. Dungarpur	3,770	5,30,258	Dungarpur
12. Ganganagar	20,629	13,94,011	Ganganagar
13. Jaipur	14,000	24,82,385	Jaipur
14. Jaisalmer	38,401	1,66,761	Jaisalmer
15. Jalore	10,640	6,67,950	Jalore
16 Jhalawar	6,216	6,22,001	Jhalawar
17. Jhunjhunu	5,929	9,29,230	Jhunjhunu
18. Jodhpur	22,860	11,62,712	Jodhpur
19. Kota	12,437	11,43,870	Kota
20. Nagaur	17,718	12,62,157	Nagaur
21. Pali	12,391	9,70,002	Pali
22. Sawai Madhopur	10,593	11,93,528	Sawaimadhopur
23. Sikar	7,732	10,42.648	Sikar
24. Sirohi	5,135	4,23,815	Sirohi
25. Tonk	7,200	6,25,830	Tonk
26. Udaipur	17,267	18,03,680	Udaipur

SIKKIM

Area : 7,299 sq km
Capital : Gangtok

Population : 2,09,843
Principal languages: Bhutia, Nepali, Lepcha and English

AGRICULTURE

The state's economy is principally agrarian. Rice, maize, millet and barley are the main crops. Cardamom, orange, potato, citrus, apple and pineapple are the major cash crops.

Regional centres carrying out both experimental research works and extension works are functioning at Gyalashing, Hillay, Burmoik, Nazitam, Pakyong, Mangan, Lachung, Mazitar and Namchi. An Agricultural Research Centre has been opened where research on crops

[1]As on 29 January 1980.
[2]As on 4 February 1980.

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

INDUSTRY

Rajasthan accounts for the country's entire output of lead and zinc concentrates, emeralds and garnets. Similarly, 92 per cent of India's gypsum, 90 per cent of silver ore, 75 per cent of asbestos and felspar and 20 per cent of mica are mined here. It has rich salt deposits at Sambhar and other places. Copper mines are situated at Khetri and Dariba.

Textile, rugs and woollen goods, sugar, cement, glass, sodium producing plant, oxygen and acetylene producing units, manufacture of pesticides, insecticides and dyes are some of the major industries. Other enterprises include the manufacture of caustic soda, calcium carbide, nylon and tyre cord and copper smelting. Among the important central government undertakings in the state is the Precision Instruments factory at Kota. In March 1979, there were 5,049 factories subject to the Factories Act, 1948.

Important handicrafts are marble work, woollen carpets, jewellery, embroidery, articles of leather, pottery and brass embossing.

IRRIGATION AND POWER

The major irrigation schemes implemented since 1947 are the Kota Barrage and Rana Pratap Sagar, both inter-state projects in collaboration with Madhya Pradesh. The Rajasthan Canal will be the longest in the world when completed. Steps are being taken to complete the project by 1984. It will irrigate about 11.4 lakh hectares of land in the desert districts. Besides a number of small and medium irrigation schemes, the state is benefited from Bhakra Nangal Project, Gandhi Sagar Dam and Beas Project. Mahi project is also in progress. In 1977-78, the gross irrigated area in Rajasthan was 31.66 lakh hectares.

Rajasthan has at present an installed power capacity of 871.5 mega watts. Atomic power project has also started its production. Rajasthan had only 43 electrified villages and towns in 1951; the number increased to 12,927 up to November 1979. For irrigation, 1,72,257 wells have been energised.

Antyodaya : For the economically poor, the state government launched Antyodaya Scheme on 2 October 1977. So far 2.67 lakh families have been identified and means of livelihood provided to 2.31 lakh families up to November 1979.

GOVERNMENT

Governor : Raghukul Tilak

Council of Ministers[1]

Chief Minister : Jagannath Pahadia
Cabinet Ministers : Hanuman Prasad Prabhakar, Smt Kamala Beniwal and Badri Prasad Gupta
Ministers of State : Rampal Upadhya, Smt Bhagwati Devi, Abdul Rehman Choudhary, Narender Singh Bhati and Mangilal Arya.

Legislative Assembly[2]

Speaker : Poonam Chand Bishnoi
Dy. Speaker : Vacant

High Court[3]

Chief Justice : Chand Mal Lodha
Judges : K. D. Sharma, D. P. Gupta, M. L. Shrimal, P. D. Kudal, Guman Mal Lodha, Krishna Mal Lodha and M. L. Joshi.

[1]As on 17 June 1980.
[2]As on 4 February 1980.
[3]As on 6 August 1980.

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

Additional Judges : Narendra Mohan Kasliwal, Milap Chand Jain, Suresh Chandra Agrawal, Km Kanta Bhatnagar, M. B. Sharma and S. S. Didwania.

Public Service Commission[2]

Chairman : Ram Singh
Members : H. D. Gupta, D. D. Chowhan and S. Adiyappa.

Chief Secretary[1] : G. K. Bhanot

AREA, POPULATION AND HEADQUARTERS OF DISTRICTS

District	*Area (sq km)*	*Population (1971 census)*	*Headquarters*
1. Ajmer	8,479	11,47,729	Ajmer
2 Alwar	8,382	13,91,162	Alwar
3. Banswara	5,037	6,54,586	Banswara
4. Barmer	28,387	7,74,805	Barmer
5. Bharatpur	8,093	14,90,206	Bharatpur
6. Bhilwara	10,450	10,54,890	Bhilwara
7. Bikaner	27,231	5,73,149	Bikaner
8. Bundi	5,550	4,49,021	Bundi
9. Chittorgarh	10,858	9,44,981	Chittorgarh
10. Churu	16,829	8,74,439	Churu
11. Dungarpur	3,770	5,30,258	Dungarpur
12. Ganganagar	20,629	13,94,011	Ganganagar
13. Jaipur	14,000	24,82,385	Jaipur
14. Jaisalmer	38,401	1,66,761	Jaisalmer
15. Jalore	10,640	6,67,950	Jalore
16 Jhalawar	6,216	6,22,001	Jhalawar
17. Jhunjhunu	5,929	9,29,230	Jhunjhunu
18. Jodhpur	22,860	11,62,712	Jodhpur
19. Kota	12,437	11,43,870	Kota
20. Nagaur	17,718	12,62,157	Nagaur
21. Pali	12,391	9,70,002	Pali
22. Sawai Madhopur	10,593	11,93,528	Sawaimadhopur
23. Sikar	7,732	10,42.648	Sikar
24. Sirohi	5,135	4,23,815	Sirohi
25. Tonk	7,200	6,25,830	Tonk
26. Udaipur	17,267	18,03,680	Udaipur

SIKKIM

Area : 7,299 sq km
Capital : Gangtok
Population : 2,09,843
Principal languages: Bhutia, Nepali, Lepcha and English

AGRICULTURE

The state's economy is principally agrarian. Rice, maize, millet and barley are the main crops. Cardamom, orange, potato, citrus, apple and pineapple are the major cash crops.

Regional centres carrying out both experimental research works and extension works are functioning at Gyalashing, Hillay, Burmoik, Nazitam, Pakyong, Mangan, Lachung, Mazitar and Namchi. An Agricultural Research Centre has been opened where research on crops

[1]As on 29 January 1980.
[2]As on 4 February 1980.

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

pertaining to the hill areas is being done. There is a cardamom nursery at Mangan and fruit nursery at Lagyap and an apple orchard at Lachung.

About a third of the area is covered by forests. *Sal* abounds in the south while conifers are found in plenty in the north. Broad leaf varieties grow abundantly in other parts.

Sheep, goats, cattle and yaks are abundant and wool, skins and hides are among the principal raw materials for industries. There is an animal husbandry farm at Tadong.

INDUSTRY

A multi-purpose state-level Industrial Development Investment Corporation has been established with the object of accelerating industrial development in the state by providing financial assistance to small and medium scale industries. An Industrial Training Institute has been set up at Rangpo which imparts training to local youth.

The Sikkim Mining Corporation, Rangpo, set up in 1960, produces copper, lead and zinc. Recently, the Geological Survey of India and the Corporation had jointly located high grade deposits of gold, silver, copper and zinc in combined form. The deposits are estimated to be 20 lakh tonnes. The copper mine of Dikchu is under exploration.

The Government Institute of Cottage Industries, set up in 1957 at Gangtok, encourages local handicrafts. Wool weaving and carpet weaving are among important traditional industries. Important industrial ventures include the fruit preservation factory at Singtam, the distillery near Rangpo and a tannery at Mazitar, Sikkim Jewels and Sikkim Electronics at Gangtok and a wood working centre at Bordang. A watch assembly unit in Gangtok is another industrial venture started in collaboration with HMT.

IRRIGATION AND POWER

Sikkim has tremendous water-power potential. In 1961, the Rongnek hydel project with a generating capacity of 2.1 mw was completed. There are four hydel power stations at Mangan, Rimbi, Rohtak and Sang Khola. The prestigeous Lower Lagyap hydel project was commissioned last year.

GOVERNMENT

Sikkim became a full fledged state of the Indian Union with effect from 26 April 1975. On 1 March 1975, it had become an associate state. The Legislative Assembly adopted a resolution on 10 April 1975 abolishing the institution of Chogyal and seeking for the territory full statehood in the Indian Union.

This resolution was endorsed by the people of Sikkim by an overwhelming majority in a special poll held on 14 April 1975.

The Constitution (Thirty-sixth Amendment) Act, 1975, was passed by Parliament on 26 April 1975 for giving effect to the wishes of the people of Sikkim to become fully integrated with the Indian Union as a constituent state.

Governor : B. B. LAL

Council of Ministers[1]

Chief Minister : Nar Bahadur Bhandari
Ministers : Sherale Palden, Samten Bhutia, Athup Lepcha, Sanchaman Limboo, Tulsi Ram Sharma, Garjaman Gurung and Lachen Rimpoche.

[1]As on 14 February 1980.

CC-0. Agamnigam Digital Preservation Foundation, Chandigarh

Legislative Assembly[1]

Speaker : Sonam Tsering
Dy. Speaker : L. B. Basnett

High Court[1]

Chief Justice : Manmohan Singh Gujral

Chief Secretary : T. S. Gyaltshen

AREA, POPULATION AND HEADQUARTERS OF DISTRICTS

District	*Population* (1971 *census*)	*Headquarters*
1. East	85,621	Gangtok
2. North	13,014	Mangan
3. South	52,432	Namchi
4. West	58,785	Gyalshing

TAMIL NADU

Area : 1,30,069 sq km
Capital : Madras
Population : 4,11,99,168
Principal language : Tamil

AGRICULTURE

The total cultivated area was about 77.68 lakh hectares in 1977-78, of which the irrigated area was about 37.23 lakh hectares (47.9 per cent). The main food crops grown in the state are rice, maize, jowar, bajra, ragi and pulses. Important commercial crops are sugarcane, oilseeds, cotton, chillies, coffee, tea and rubber. The estimated production of foodgrains during 1978-79 was 82.71 lakh tonnes and that of sugarcane (in terms of gur) and oilseeds 18.79 and 12.12 lakh tonnes respectively.

Forests cover an area of 22,151.91 sq km. The main forest products are timber, sandalwood, softwood, bamboo and eucalyptus.

INDUSTRY

Limestone, magnesite, mica, quartz, felspar, salt, bauxite, lignite and gypsum are some of the minerals found in the state.

The major industries are cotton textiles, chemical fertilizers, paper and paper products, printing and allied industries such as diesel engines automobiles and parts, cement, sugar, iron and steel and railway wagons and coaches.

A number of public sector undertakings are located in Tamil Nadu. Important among them are the Neyveli Lignite Complex, the Integral Coach Factory, the High Pressure Boiler Plant, the Hindustan Photo Films Factory, the Surgical Instruments Factory, the Hindustan Teleprinters, the Madras Refineries, the Madras Fertilizers as also some defence units including the Heavy Vehicles Factory.

The state is an important exporter of tanned hides and skins, leather goods, cotton piecegoods and yarn, tea, coffee, spices, engineering goods and tobacco.

IRRIGATION AND POWER

Important irrigation schemes implemented since Independence are the Bhavani, the Amaravati, the Vaigai, the Parambikulam-Allyar the Krishnagiri, the Sattanur, the Pullambadi-Kattalai high level canal, the Gomukhi Nadhi, Chittor Pattannamkal and the Ponnaniar schemes.

There are 18 hydro-electric stations and 4 thermal stations in the state. The total installed capacity of power, hydel and thermal, was 2,719 mw as on 30 September 1979. Construction of an atomic power

[1]As on 14 February 1980.

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

station at Kalpakkam in Chingelpattu district is in progress. Tamil Nadu has 63,404 electrified towns, villages and hamlets including all the 25,526 harijan colonies. For irrigation, 8,67,122 pumpsets were energised as on 30 September 1979.

GOVERNMENT

Governor : Prabhudas Patwari

Council of Ministers[1]

Chief Minister : M. G. Ramachandran
Cabinet Ministers : V. R. Nedunchezhian, S. D. Somasundaram, C. Aranganayakam, R. M. Veerappan, K. Kalimuthu, C. Ponnaiyan, P. Kolandaivelu, S. Raghavanandam, Dr H. V. Hande, K. Raja Mohammed, S. Muthuswamy, S. Thirunavukarasu, M. Vijayasarathy and Smt Gomathi Srinivasan.

Legislative Assembly[2]

Speaker : K. Rajaram
Dy. Speaker : Vacant

Legislative Council[3]

Chairman : M. P. Sivagnanam
Deputy Chairman : G. Swaminathan

High Court[4]

Chief Justice : M. M. Ismail

Judges : P. R. Gokulakrishnan, Gopalaswami Ramanujam, V. Ramaswami, C. J. R. Paul, S. Natarajan, A. Varadarajan, V. Sethuraman, S. R. Pandian. S. Mohan, S. Suryamurthy, V. Balasubrahmanyan, S. Padmanabhan, M. A. Sathar Sayeed, T. Sathiadev, S. Nainar Sundaram, G. Maheswaran, P. Venugopal, S. Swamikkannu and V. Rathinam.

Additional Judges : K. Sengothuvelan and K. Shanmugam.

Public Service Commission[2]

Chairman : J. A. Ambasankar

Members : K. Pandurangan, P. Sankaran, S. Srinivasan, S. M. Sulaiman, M. Thirumalaswamy and M. Periasamy.

Chief Secretary : V. Karthikeyan

AREA, POPULATION AND HEADQUARTERS OF DISTRICTS

District	*Area* (*sq km*)	*Popu lation* (1971 *census*)	*Headquarters*
1. Chingelpattu	7,920	29,07,599	Kancheepram
2. Coimbatore	7,504	25,76,162	Coimbatore
3. Dharmapuri	9,643	16,77,775	Dharmapuri
4. Kanniakumari	1,684	12,22,549	Nagercoil
5 Madras	128	24,69,449	Madras
6. Madurai	12,629	39,38,197	Madurai
7. Nilgiris	2,549	4,94,015	Udakamandalam
8. North Arcot	12,265	37,55,797	Vellore
9. Ramanathapuram	12,578	28,60,207	Madurai
10. Salem	8,643	29,92,616	Salem
11· South Arcot	10,898	36,17,723	Cuddalore
12. Periyar[4]	8,169	17,97,016	Erode
13. Pudukkottai	4,649·9	9,47,351	Pudukkottai
14. Tiruchirapalli	11,114·3	31,92,134	Tiruchirapalli
15. Thanjavur	8,261·8	35,50,063	Thanjavur
16. Tirunelvelli	11,433	32,00,515	Tirunelveli

[1]As on 9 June 1980.
[2]As on 4 January 1980.
[3]As on 6 September 1980.
[4]Periyar district was formed on 17 October 1979.

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

TRIPURA

Area : 10,477 sq km
Capital : Agartala

Population : 15,56,342
Principal languages : Bengali, Tripuri and Manipuri

AGRICULTURE

About 60 per cent of the area is under forests. Irrigated area is eight per cent of the cultivated area. Rice, jute, *mesta,* potatoes, oilseeds, sugarcane and cotton are the main crops. Production of rice in 1977-78 was estimated at 3.63 lakh tonnes.

INDUSTRY

Tea is the major industry in Tripura. Tea plantations cover an area of about 5,600 hectares in 1977 and the annual production of processed tea was about 46 lakh kg. Important cottage industries are handloom, handicrafts and khadi.

Some major industries are proposed to be set up in the state. They include a paper mill and a jute mill. Establishment of the jute mill has made substantial progress.

IRRIGATION AND POWER

A number of schemes of lift irrigation and installation of tube-wells were taken up in the Fourth Plan. Ninety five schemes have so far been completed in 1977-78 and eighty schemes are at various stages of execution. Irrigation potential at the end of 1977-78 was 4,390 hectares.

The total installed power capacity of the state is 15 mw. Electricity generated per year is 3 crore units. Four hundred and ten villages had been electrified and 145 pumpsets energised by March 1978.

GOVERNMENT

Governor : L. P. Singh

Council of Ministers[1]

Chief Minister : N. Chakravorty
Ministers : Dasarath Deb, Biren Dutta, Anil Sarkar, Dines Deb Burma, Baidyanath Majumdar, Bajuban Reang, Araber Rahman, Jogesh Chakrabarty, Braja Gopal Ray and Vivekananda Bhowmik.

Legislative Assembly[1]

Speaker : Sudhainya Deb Barma
Deputy Speaker : Jyotirmay Das

High Court[1]

The jurisdiction of Gauhati High Court extends over Tripura. A branch of Gauhati High Court is functioning at Agartala.

Public Service Commission[1]

Chairman : L. N. K. Dey
Member : U. R. Deb Barman

Chief Secretary : T. S. Murty

AREA, POPULATION AND HEADQUARTERS OF DISTRICTS

District	*Area* (*sq km*)	*Population* (1971 *census*)	*Headquarters*
1. North Tripura	3,541	4,05,009	Kailashahar
2. South Tripura	3,577	3,99,728	Udaipur
3. West Tripura	3,359	7,51,605	Agartala

[1]As on 5 April 1980.

CC-0. Panjab Digital Library Digital Presevation Foundation, Chandigarh

UTTAR PRADESH

Area : 2,94,413 sq km
Capital : Lucknow
Population : 8,83,41,144
Principal language : Hindi

AGRICULTURE

The principal food crops are wheat, rice, gram, barley, maize and bajra. Cotton, linseed, groundnut, sugarcane, tea, sesamum, rapeseed, mustard and tobacco are the important cash crops. Jute is also cultivated in some areas. It is the main opium growing state in India.

The agricultural production reached to a new height of 219.95 lakh tonnes during 1978-79, which is a record.

Forests cover 17.42 per cent of the area of the state.

INDUSTRY

Uttar Pradesh is one of the principal sugar producing states. While the handloom industry is the largest cottage industry, cotton and woollen textiles, leather and footwear, distilleries and breweries, paper and chemicals, agricultural implements and glass and glass products are some of the other flourishing industries.

A number of big public sector undertakings have been set up in the state. These are : the Bharat Heavy Electricals at Hardwar, the Indian Drugs and Pharmaceuticals at Rishikesh, the Diesel Locomotive Factory at Varanasi, Fertilizer Factory at Gorakhpur and Allahabad, Singrauli Coal Fields, Singrauli, Modern Bakery, Kanpur, Bharat Pumps & Compressors, Naini, Indian Telephone Industries, Naini and Rae Bareily, the Triveni Structurals at Naini, the Deep Freeze Meat Plant at Tundla, the Hindustan Aeronautics at Lucknow, Transformer Factory, Jhansi and two cement factories at Churk and Dalla. A new cement factory is coming up at Kajrahat in Mirzapur district. There are also the Bharat Electronics Ltd., Ghaziabad; Scooters India Ltd., Lucknow and Tannery and Footwear Corporation of India Ltd., Kanpur. The Artificial Limbs Manufacturing Corporation of India Ltd., Kanpur, Oil Refinery, Mathura, Foundry Forge, Hardwar are among the central projects being set up in Uttar Pradesh.

The traditional handicrafts are silk fabrics, metal-ware, woodwork, ceramics, stone work, dolls, artistic leather articles, papier mache, perfumery, bamboo products and musical instruments.

Special attention has been given to khadi and village industries programme in the state. As a result 21,869 village units have come up at the end of 1978-79. In view of the encouraging response for rural industrialisation, 26 new industrial estates are being developed in addition to the existing 61 estates.

IRRIGATION AND POWER

The state has some of the oldest canal systems in the country among which are the eastern Yamuna canal, the upper and lower Ganga canal, Agra canal, Betwa canal, Sarda canal, Dhassan canal and Ken canal. Important irrigation projects implemented since 1947 are Matatilla Dam, Ramganga, western Gandak canal and Sarda Sagar, Rihand Dam, Obra hydel and thermal power houses, besides a number of small and medium irrigation projects. Yamuna and Tehri hydel projects are in progress. The first stage of the Rs 200-crore Sarda Sahayak irrigation project has been completed providing irrigation to 1.27 lakh hectares. On completion, this project will irrigate 15.82 lakh hectares in central and eastern districts of the state lying in Ganga-Ghagra doab. Up to 31 March 1979, a potential of 82.68 lakh hectares has

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

been created through all major and medium irrigation works in the state.

The total installed generating capacity of power including both hydel and thermal, was 3,182 mw in March 1979. An atomic power station is being set up at Narora in Bulandshahar district. Work on three more thermal power schemes—Poricha (Jhansi)—Anpara (Mirzapur) and Tanda (Faizabad) is in hand. The state had only 110 electrified villages in 1951; the number increased to 36,223 in March 1979 and 12,362 harijan bastis have also been electrified upto March 1979. For irrigation, 3,07,861 pumpsets/tube-wells had been energised upto March 1979 compared to only 3,000 tube-wells in 1951.

GOVERNMENT

Governor : C. P. N. Singh

Council of Ministers[1]

Chief Minister : Vishwanath Pratap Singh
Cabinet Ministers : Vir Bahadur Singh, Lok Pati Tripathi, Brahm Dutt, Abdul Rehman Nashtar, Ram Singh Khanna, Jagdish Prasad, Yashpal Singh, Balram Singh Yadav, Ammar Rizvi and Vidya Bhusan.
Ministers of State : Chandra Mohan Singh Negi, Ram Narayan Pathak, Hari Singh Balmiki and Amin Ansari.

Legislative Council[2]

Chairman : Dr Virendra Swarup
Dy Speaker : Yadvendra Singh

Legislative Assembly[3]

Speaker : Sripat Mishra
Dy Speaker : Yadvendra Singh

High Court[2]

Chief Justice : Satish Chandra
Judges : Yashoda Nandan, Ram Briksha Misra, Hari Swarup, M. N. Shukla, H. N. Seth, Mohd. Hamid Husain, S. B. Malik, Jagmohan Lal Sinha, Kamal Narain Singh, C. S. P. Singh, Gopi Nath, Mufti Bahauddin Farooqi, T. S. Misra, N. D. Ojha, Kamtanath Seth, P. N. Bakshi, H. N. Kapoor, M. P. Mehrotra, D. N. Jha, Amitav Banerji, B. N. Katju, K. C. Agarwal, J. P. Chaturvedi, M. P. Saxena, V. N. Verma, Mirza Mohd. Murtaza Husain, K. S. Varma, B. N. Sapur, R. M. Sahai, P. N. Harkauli, D. N. Agarwal, P. S. Gupta, Rajaram Rastogi, Umesh Chandra Srivastava, K. P. Singh and Sudarshan Dayal Agarwal.
Additional Judges : P. N. Goel, M. M. Gupta, Mahavir Singh, Saiyad Jarrar Haider, Vidaya Nath Misra, K. N. Goyal, Vijai Kumar Mehrotra, Satish Chandra Mathur, R. C. Srivastava, Murli Dhar, Ram Surat Singh, Amrendra Nath Verma and Narendra Nath Mittal.

Public Service Commission[2]

Chairman : Dr. Bishamber Singh
Members : Muhammad Safiul Haq, S. N. Shukla, Dr. B. L. Verma, Chunni Lal, Ram Hit Ram, Pooran Chand Pandey, Anup Singh and D. P. Arya.

Chief Secretary : D. K. Bhattachariya

[1]As on 9 June 1980.
[2]As on 5 April 1980.
[3]As on 6 September 1980.

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

AREA, POPULATION AND HEADQUARTERS OF DISTRICTS

District	*Area* (*sq km*)	*Population* (1971 *census*)	*Headquarters*
1. Agra	4,816	23,08,638	Agra
2. Aligarh	5,024	21,11,829	Aligarh
3. Allahabad	7,255	29,37,278	Allahabad
4. Almora	7,023	7,50,038	Almora
5. Azamgarh	5,744	28,57,484	Azamgarh
6. Bahraich	6,871	17,26,972	Bahraich
7. Ballia	3,183	15,88,935	Ballia
8. Banda	7,645	11,82,215	Banda
9. Bara Banki	4,422	16,35,593	Bara Banki
10. Bareilly	4,125	17,79,867	Bareilly
11. Basti	7,309	2,98,409	Basti
12. Bijnor	4,852	14,90,185	Bijnor
13. Budaun	5,158	16,45,967	Budaun
14. Bulandshahr	4,895	20,73,343	Bulandshahr
15. Chamoli	9,125	2,92,571	Chamoli
16. Dehra Dun	3,088	5,77,306	Dehra Dun
17. Deoria	5,400	28,12,350	Deoria
18 Etah	4,449	15,70,925	Etah
19. Etawah	4,327	14,47,702	Etawah
20. Faizabad	4,427	19,27,281	Faizabad
21. Ferrukhabad	4,349	15,56,930	Fatehgarh
22. Fatehpur	4,168	12,78,254	Fatehpur
23. Garhwal.	5,440	5,53,028	Pauri
24. Ghazipur	3,381	15,31,654	Ghazipur
25. Gonda	7,331	23,02,029	Gonda
26. Gorakhpur	6,316	30,38,177	Gorakhpur
27. Hamirpur	7,192	9,88,215	Hamirpur
28. Hardoi	6,012	18,49,519	Hardoi
29. Jalaun	4,549	8,13,490	Orai
30. Jaunpur	4,040	20,05,434	Jaunpur
31. Jhansi	5,027	9,60,000	Jhansi
32. Lalitpur	5,042	4,71,000	Lalitpur
33. Kanpur	6,121	29,96,232	Kanpur
34. Kheri	7,691	14,86,590	Lakhimpur
35. Lucknow	2,528	16,17,846	Lucknow
36. Mainpuri	4,254	14,45,534	Mainpuri
37. Mathura	3,797	12,90,307	Mathura
38. Meerut	5,944	33,66,953	Meerut
39. Ghaziabad	—	—	Ghaziabad
40. Mirzapur	11,301	15,41,088	Mirzapur
41. Moradabad	5,946	24,28,971	Moradabad
42. Muzaffarnagar	4,245	18,02,289	Muzaffarnagar
43. Naini Tal	6,792	7,90,080	Naini Tal
44. Pilibhit	3,504	7,52,114	Pilibhit
45. Pithoragarh	7,217	3,13,747	Pithoragarh
46. Pratapgarh	3,730	14,22,707	Bela
47. Rae Bareli	4,603	15,10,812	Rae Bareli
48. Rampur	2,372	9,01,209	Rampur
49. Saharanpur	5,526	20,54,834	Saharanpur

CC-0. Agamnigam Digital Preservation Foundation, Chandigarh

District	*Area (sqkm)*	*Population (1971 census)*	*Headquatsr*
50. Shahjahanpur	4,581	12,86,104	Shahjahanpur
51. Sitapur	5,738	18,84,400	Sitapur
52. Sultanpur	4,424	16,42,928	Sultanpur
53. Tehri-Garhwal	4,421	3,97,385	Narendra Nag ar
54. Unnao	4,586	14,84,393	Unnao
55. Uttarkashi	8,016	1,47,805	Uttarkashi
56. Varanasi	5,091	28,52,459	Varanasi

WEST BENGAL

Area : 87,853 sq km — *Population* : 4,43,12,011
Capital : Calcutta — *Principal language* : Bengali

AGRICULTURE

About 57.5 per cent of the total population of West Bengal is engaged in agricultural pursuits. Gross irrigated area forms about 30 per cent of the cultivated area which is about 63 per cent of the total area. The state occupies a leading position among the rice producing states in the country. The area under paddy is nearly 70 per cent of the total cropped area. Other important food crops are wheat, pulses and oil-seeds, Barley, maize and other cereal crops are still insignificant food crops. Among the cash crops, the most important are jute, vegetables, tea and betel leaf, minor ones being tobacco and sugarcane. During 1978-79, 12.06 lakh tonnes of wheat was produced. The production of jute was about 40 lakh bales during 1978-79. The state earns considerable foreign exchange through export of jute and tea.

Temperate fruits have been successfully grown in Darjeeling hills. This is expected to help the economic development of this region.

Forests cover about 13.4 per cent of the area of the state. Major forest products are timber, honey, firewood, charcoal, *katha* and bamboo.

INDUSTRY

Coal and china clay are the two most important minerals found in West Bengal. Other minerals are dolomite, rock phosphate, fire-clay, limestone, copper, iron, silica, quartz, felspar, manganese, sandstone and moulding sand.

West Bengal is a major industrial state in the country. There is one steel plant and one alloy plant at Durgapur and another steel plant at Burnpur. The other major industries are jute, tea, cotton textiles, silk, automobile, bicycle, light engineering, paper, pharmaceuticals, chemical, aluminium, sugar, timber processing, ceramic and glass, leather and footwear, bone-meal and dairying. A number of central public sector undertakings including locomotive, cable, fertilizer, ship-building and ordnance are also located in the state. New industrial areas are being developed at Asansol, Durgapur, Haldia, Kalyani, Kharagpur, Santaldih, Siliguri and Farakka. New industrial ventures include cement, scooter, electricals, mini-steel plants, chemicals, etc.

IRRIGATION AND POWER

Important multi-purpose irrigation and power schemes implemented since 1947 are the Damodar Valley Project and the Mayurakshi Project. The other major irrigation projects are the Kangsabati and the Teesta Barrage project.

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

Of the major power projects, the Bandel thermal power station has a capacity of 320 mw and the Santaldih thermal station has a capacity of 360 mw. Durgapur Project Ltd. has 285 mw capacity. The Calcutta Electric Supply Corporation has four stations with an installed capacity of 328 mw. Installed capacity of the West Bengal State Electricity Board is 852 mw. In addition, the Damodar Valley Corporation also supplies power (390 mw) to West Bengal from its generating stations. The total installed capacity exceeds 1,300 mw.

West Bengal had only 386 electrified villages in 1951; the number increased to 12,863 by 31 March 1980. More than 24,068 irrigation pumps have been energised.

GOVERNMENT

Governor : Tribhuban Narain Singh

Council of Ministers[1]

Chief Minister : Jyoti Basu
Cabinet Ministers : Krishnapada Ghosh, Ashok Mitra, Kanailal Bhattacharjee, Jatin Chakraborty, Benoy Chowdhury, Amritender Mukherjee, Md. Amin, Hasim Abdul Halim, Partha Dey, Prasanta Sur, Chittabrata Majumder, Radhikaranjan Banerjee, Parimal Mitra, Buddhadev Bhattacharjee, Provas Chandra Roy, Kamal Guha, Bhakti Bhusan Mondal, Sambhu Charan Ghosh, Nani Bhattacharyya, Debabrata Banerjee, Sudhin Kumar and Bhabani Mukherjee.
Ministers of State : Sibendranarain Chowdhury, Md. Abdul Bari, Smt Nirupama Chatterjee, Sambhunath Mandi, Ram Chatterjee and Kanti Biswas.

Legislative Assembly[1]

Speaker : Saiyad Abul Mansur Habibullah
Dy. Speaker : Kalimuddin Shams

High Court[1]

Chief Justice : Amrendra Nath Sen
Judges : Sambhu Chandra Ghose, Ramendra Mohan Dutta, Samrendra Chandra Deb, Sabyasachi Mukharji, Tarun Kumar Basu, Pradyot Kumar Banerjee, Anil Kumar Sen, Chittatosh Mookerjee, Murari Mohan Dutt, Purna Chandra Borooah, Salil K. Roy Chowdhury, Arun Kumar Janah, Nirmal Chandra Mukherji, Ajit Kumar Sarkar, Dipak Kumar Sen, Rabindra Nath Pyne, Bankim Chandra Ray, Manashnath Roy, Bimal Chandra Basak, Ramkrishna Sharma, Ganendra Narayan Roy, Chandan Kumar Banerji, Monoj Kumar Mukherjee, Dhires Chandra Chakravorti, Smt. Padma Khastgir, Smt. Monjula Bose, Bimalendra Nath Maitra, Bhabes Chandra Chakrabarti, Smt Jyotirmoyee Nag, Smt Pratibha Bonnerjea and Sudhindra Mohan Guha.

Public Service Commission[1]

Chairman : Rabidas Baul
Members : K. Paramanik, M. Hasan, N. C. Basu Roy Chowdhuri, S. S. Chatterjee, G. N. Das and S. Boral.

Chief Secretary : A. K. Sen

[1]As on 5 May 1980.

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

AREA, POPULATION AND HEADQUARTERS OF DISTRICTS[2]

District	*Area (sq km)*	*Population (1971 census)*	*Headquarters*
1. Bankura	6,881	20,31,039	Bankura
2. Birbhum	4,550	17,75,909	Suri
3. Burdwan	7,028	39,16,174	Burdwan
4. Calcutta	104	31,48,746	Calcutta
5. Cooch Behar	3,386	14,14,183	Cooch Behar
6. Darjeeling	3,075	7,81,777	Darjeeling
7. Hooghly	3,145	28,72,116	Chinsurah
8. Howrah	1,474	24,17,286	Howrah
9. Jalpaiguri	6,245	17,50,159	Jalpaiguri
10. Malda	3,713	16,12,657	English Bazar
11. Midnapore	13,724	55,09,247	Midnapore
12. Murshidabad	5,341	29,40,204	Baharampur
13. Nadia	3,296	22,30,270	Krishnanagar
14. Purulia	6,259	16,02,875	Purulia
15. Twenty Four Parganas	13,796	84,49,482	Alipur
16. West Dinajpur	5,206	18,59,887	Balurghat

ANDAMAN AND NICOBAR ISLANDS

Area : 8,293 sq km *Population* : 1,15,133
Capital : Port Blair

AGRICULTURE

The principal crops are rice, coconut and arecanut. Other crops are sugarcane, pulses, fruits and vegetables. Rubber and palm oil cultivation has also been started.

INDUSTRY

There are about 150 medium and small scale (including a few large-sized) industrial units functioning in the territory. The large scale units are located one each at Bambooflat, Bakultala, Long Island, Haddu and Chattam. The products comprise sawn timber, commercial plywood, match splints, and veneers. Besides these, the small scale and handicraft units are engaged in shell crafts, furniture making bakery products, coir products, rice milling, wheat grinding, oil seeds crushing etc. Seven Industrial Training Institutes under the Directorate of Industries impart training to local entrepreneurs, artisans and tribals in trades like cane and bamboo crafts, wood crafts, shell crafts and tailoring. Most of these centres are training-cum-production centres. The District Industries Centre has also been recently set up at Port Blair to provide all support and facilities to entrepreneurs at one place.

IRRIGATION AND POWER

Electric supply in Port Blair was started in 1951. The present installed capacity is 6,014 kw. Apart from Port Blair, electricity is available for the public at the following places :
Wimberlygunj; Bambooflat; Mayabunder; Diglipur; Rangat; Car Nicobar; Nancowrie; Biglapathy; Campbell Bay; Neil Island; Havelock; Baratang; East Bay Katchal; Kadamtalla and little Andaman.

GOVERNMENT

Chief Commissioner : *S. L. Sharma*

High Court

The jurisdiction of Calcutta High Court extends over Andaman and Nicobar Islands. For list of judges see under West Bengal.

[2]As re-organised on 21 January 1972 according to North Eastern Areas (Reorganisation) Act, 1971.

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

Public Service Commission

Recruitment is made through the Union Public Service Commission.

Chief Secretary : Ashoke Joshu

AREA, POPULATION AND HEADQUARTERS OF DISTRICTS

District	*Area (sq km)*	*Population (1971 census)*	*Headquarters*
1. And man	6,340	93,468	Port Blair
2. Nicobar	1,953	21,665	C r Nicobar

ARUNACHAL PRADESH

Area : 83,578 sq km *Population* : 4,67,511
Capital : Itanagar

AGRICULTURE

Nearly 46 per cent of the population of Arunachal Pradesh is engaged in agriculture. Irrigated area forms 17 per cent of the total cultivated area of about 14,000 hectares. The traditional method of agriculture is *jhumming,* a kind of shifting cultivation. The forests are cleared and crops are raised for one to three years, depending on the fertility of the soil. Thereafter, the cultivators move on elsewhere. However, sedentary cultivation is followed in the valleys and terraces, the methods being called 'wet rice cultivation' and 'terrace rice cultivation' respectively. Main crops are rice, maize, millets, wheat and mustard. Forest cover 61,000 sq km of the area.

The horticultural potential in Arunachal Pradesh is noted very high. Banana, citrus and pineapple below 3,000 feet, peach, plum, pears, and spricut upto 5,000 and apple, plum, cherries, walnuts, almonds and hazelunts etc. above 5,000 feet are grown in three out of five districts of Arunachal Pradesh.

INDUSTRY

Principal industries are forest-based. Medium and small industries established include saw mills, plywood and veneering mills, rice mills, fruit preservation units, oil expellers besides handloom and handicrafts industries. The government is providing training facilities in various trades under cottages industries as well as technical education through the Government Craft Training Centres and Industrial Training Institutes.

IRRIGATION AND POWER

A hydel project with an installed capacity of 750 kw was commissioned at Rahung in 1972. Two more hydel projects at Pasighat and Basar with installed capacities of 200 kw and 100 mw respectively were completed in November 1973. During 1976 and 1977, Along (400 kw), Tezu (500 kw) Tirat-jo-micro-hydel project (750 kw) and Tawang (1,500 kw), were commissioned. Ziro (2,000 kw), Tezu (500 kw), Dirang (1,500 kw) and Singh hydro-electric projects are almost ready. The total installed capacity in March 1975 was 3.4 mw. Arunachal Pradesh had only seven electrified villages in 1961 and the number increased to 61 by 31 March 1975.

GOVERNMENT

Lt. Governor : R. N. Haldipur

Council of Ministers[1]

Chief Minister : Gegong Apang
Ministers : Khapriso Krong, T. Ngemu, Tadar Tang, T. Dulom and T. Tashi.

[1]As on 13 May 1980.

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

Deputy Ministers : Kameng Dolo and Haijen Ponglaham.

Legislative Assembly[1]

Speaker : T. L. Rajkumar
Deputy Speaker : Pasang Wangchuk Sona.

High Court[1]

The jurisdiction of Gauhati High Court extends over Arunachal Pradesh. For list of Judges, see under Assam.

Public Service Commission[1]

Recruitment is made through special selection board constituted by the Union Ministry of Home Affairs in respect of Class I posts.

Chief Secretary : I. P. Gupta.

AREA, POPULATION AND HEADQUARTERS OF DISTRICTS

District	*Area* (*sq km*)	*Population* (1971 *census*)	*Headquarters*
1. Kameng	13,724	86,001	Bomdila
2. Lohit	24,427	62,865	Tezj
3. Siang	23,723	1,08,247	Along
4. Subansiri	14,797	1,12,928	Ziro
5. Tirap	6,907	97,470	Khonsa

CHANDIGARH

Area : 114 sq km *Population* : 2,57,251
Capital : Chandigarh

AGRICULTURE

Irrigated area covered 52 per cent of the total cultivated area during 1977-78. Wheat, maize and potato are the major crops of the area. The production of foodgrains in 1977-78 was 7,785 tonnes. Forests cover 27.5 per cent of area.

INDUSTRY

There are 13 industries in the large and medium sector and 603 units in the small industries sector. The major industries are wool tops and yarn, hosiery needles, electric meters, antibiotics and medicines, bicycle rims, bakery chains and free wheels, card-board and steel furniture. The cottage and small-scale industries include iron and steel re-rolling, steel fabrication, sanitary fittings, door fittings, electronic components, cutlery, machine screws, hardware, electrical appliances, plastic shoes, cotton ginning, machine parts, utensils, paints and varnishes, tiles, conduit pipes and rivets, insecticides and pesticides, auto cables and domestic cables, thermometers, wire drawing and wire products, soap and chemicals, cement pipes, tape recorders, tractor parts, calculators, record players, handloom weaving, shoe making knitting machines, oil crushing, spics, exercise books, card board boxes, nylon niwar, textile weaving and detergent powders. An electronics industry complex is being developed.

IRRIGATION AND POWER

The total installed power capacity on 30 September 1978 was 51 mva. All the 26 villages had been electrified. The number of pumpsets/tube-wells energised for irrigation was 496.

GOVERNMENT

Chief Commissioner : J. C. Agarwal.

[1]As on 13 May 1980.

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

High Court — The jurisdiction of the High Court of Punjab and Haryana extends over Chandigarh. For list of judges, see under Haryana.

Public Service Commission — Recruitment is made through the Union Public Service Commission.

DADRA AND NAGAR HAVELI

Area : 491 sq km — *Population* : 74,170
Capital : Silvassa

AGRICULTURE — Agriculture is the main occupation of *Adivasis* who comprise 88 per cent of the total population. Paddy and ragi are the major food crops, while wheat is also grown in some areas. About 20,000 hectares of land is under cultivation. Agriculture is dependent on rainfall.

More than 40 small poultry units have been started by individual adivasis apart from three poultry cooperative societies. Seven gobar gas plants have also been set up. Apart from a bull recovering farm, a demonstration poultry farm was started in 1974-75. Veterinary dispensary, five veterinary aid centres, poultry farm, piggery farm, fodder demonstration farm, feed mixing unit, artificial insemination centre and buffalo breeding-*cum*-demonstration farm have been started by the administration of the territory.

Forests occupy 41.5 per cent of the area. Main forest products are khair, sivan, teak, sadad and mahuda.

INDUSTRY — There are no major industries. A beginning has, however, been made in this direction by establishing an industrial estate at Piparia and another at Masat near Silvassa. There are 74 industrial units in the union territory (including three medium scale), providing employment to about 1,800 workers. The products manufactured includes automobile parts, spectacle frames, cotton and art silk fabrics, nylon filaments, foam products, detergent powder, soap, biscuits, chemical engineering goods, candles, fruit juice, wrist watches etc. The total production per year is about Rs 16 crores.

IRRIGATION AND POWER — There is no major or medium irrigation scheme. However, the union territory is participating with the Government of Gujarat and Goa, Daman and Diu in the Daman-ganga reservoir project. Minor irrigation activities include construction of 20 lift irrigation schemes, 14 check dams and 2 tube wells. The total area under irrigation is 395 hectares.

Power is purchased from Gujarat. Out of 72 villages, 52 have been electrified. So far 190 agricultural and 37 drinking water pump sets have been energised. A 66 KVA sub-station has started functioning at Silvassa.

GOVERNMENT — *Administrator* : Col. Pratap Singh Gill

High Court — The jurisdiction of Bombay High Court extends over this union territory. For list of judges, see under Maharashtra.

Public Service Commission — Recruitment for higher posts is made through the Union Public Service Commission.

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

Queuing up to cast their votes

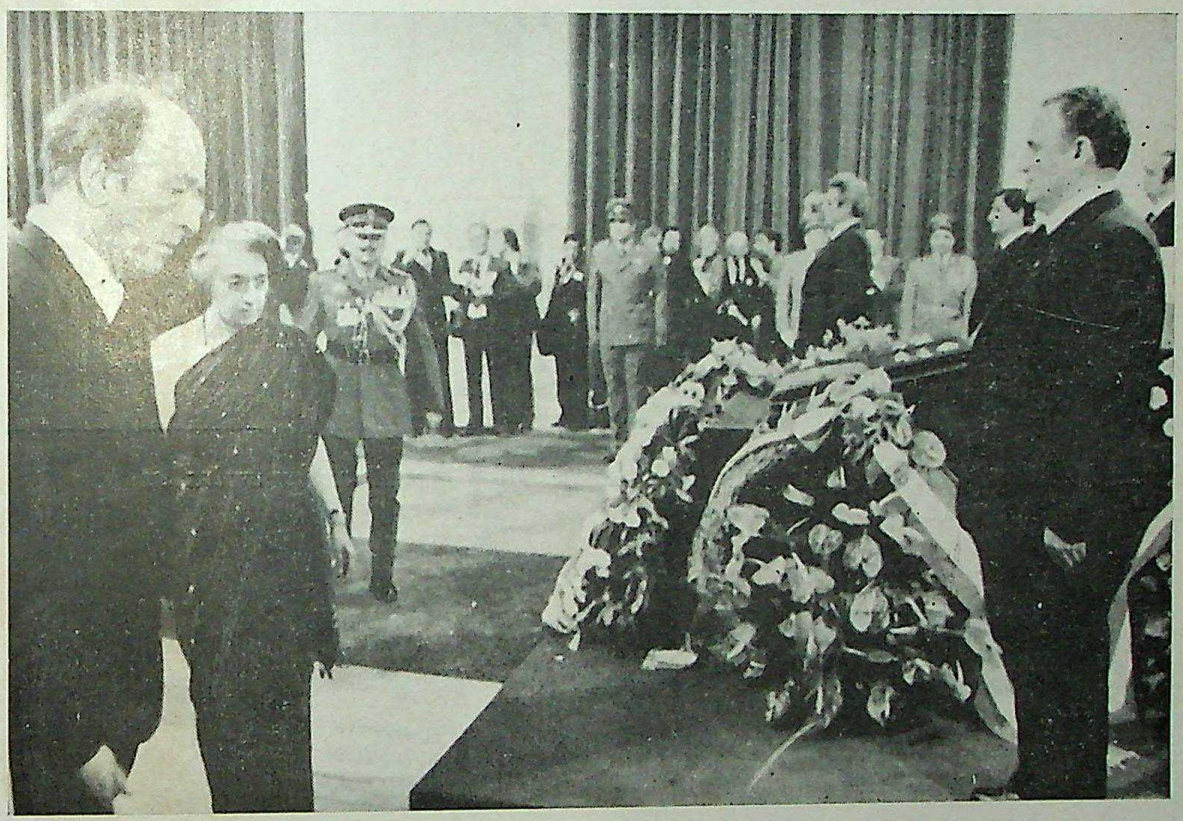
General Elections—January 1980

A wizened old woman of 95 casting her vote at a polling booth in Rajasthan on 3 January 1980.

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

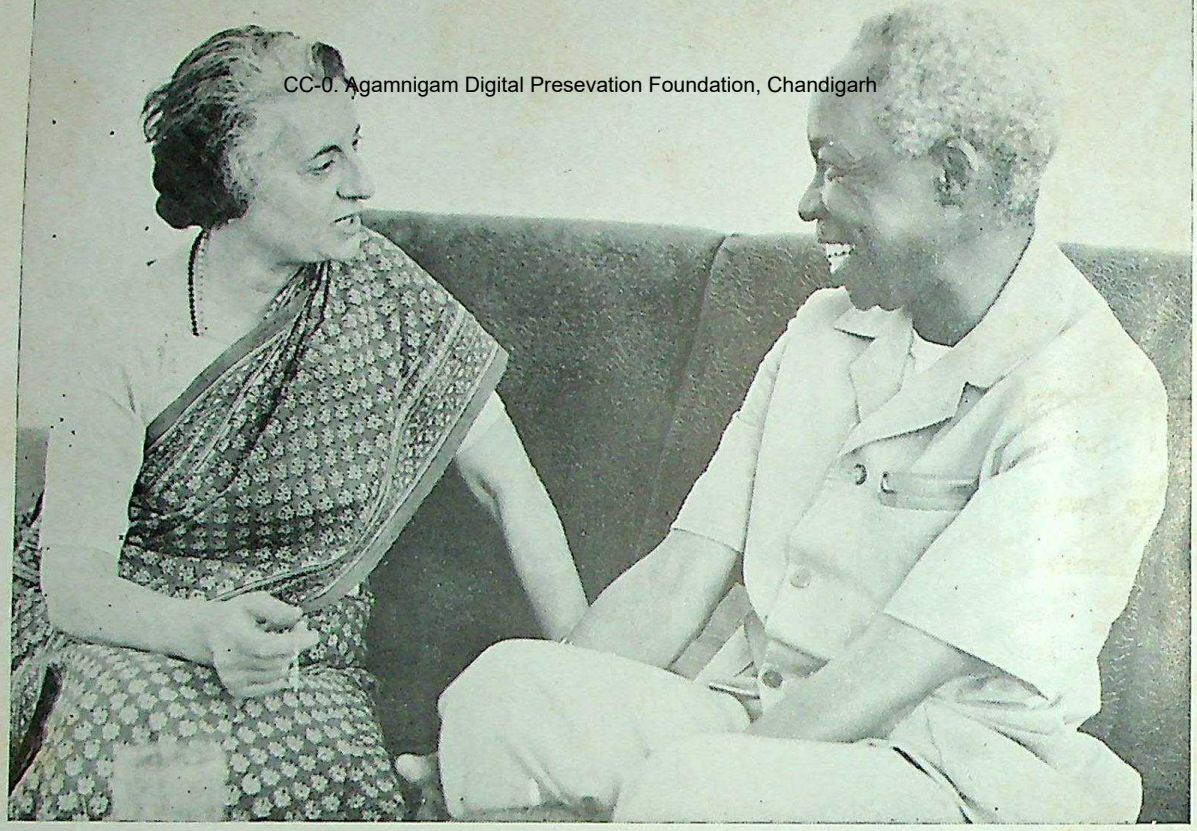
The President administering the oath of office to Smt. Indira Gandhi at Rashtrapati Bhavan in New Delhi on 14 *January* 1980.

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh



Smt. Indira Gandhi in Belgrade to attend the funeral of President Broz Tito of Yugoslavia

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh



Prime Minister Indira Gandhi with President Nyerere of Tanzania on her arrival at Dar-es-Salaam on 16 *April* 1980

Mother Teresa on her arrival at Palam Airport on 9 *November* 1979. *She was the recipient of the Nobel Peace Prize for* 1979. *She was also awarded the Bharat Ratna.*

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

DELHI

Area : 1,485 sq km — *Population* : 40,65,678
Capital : Delhi

AGRICULTURE Wheat, gram, rice, maize, bajra and jowar are the principal food crops. Small quantities of cash crops, such as sugarcane, mustard, tobacco and chillies are also grown. Mixed cropping including cultivation of vegetables and poultry keeping are becoming popular. The production of foodgrains in 1977-78 was 1.34 lakh tonnes. The total cropped area during 1977-78 was 1,00,341 hectares.

INDUSTRY There were about 42,000 industrial units employing approximately 3,48,000 persons in Delhi in 1978. The total investment in these units was estimated at Rs 625 crore and the value of total production was estimated at Rs 1,168 crore. Prominent industries are steel castings, drugs and chemicals, paints and varnishes, television sets, radios, transistors, electrical appliances, scientific instruments, ready-made garments and vegetable oils. Other industries include leather and rubber goods, pottery, textiles and tanning. The well-known cottage industries of Delhi are ivory works, gold and silver embroidery, jewellery, brass and copperware.

IRRIGATION AND POWER There is no major irrigation project in Delhi. Only minor works and tube-wells help in irrigation. The Delhi Electric Supply Undertaking, responsible for generation and distribution, had a derated capacity of 2,58,000 kw during 1977-78. Delhi has electrified all the villages as against only 24 in 1957.

GOVERNMENT *Lt. Governor* : Jagmohan.
Metropolitan Council was dissolved on 21 March 1980.

High Court[1] *Chief Justice* : V. S. Deshpande.
Judges : Parkash Narain, V. D. Mistra, Rajinder Sachar, Prithvi Raj, Dalip K. Kapur, T. P. S. Chawla, Avad Behari Rohtagi, R. N. Aggarwal, H. L. Anand, Yogeshwar Dayal, Fauja Singh Gill, M. S. Joshi, S. S. Chadha, M. L. Jain, S. Ranganathan, Leila Seth, N. N. Goswamy, Sultan Singh, O. N. Vohra, Harish Chandra, S. N. Kumar and S. B. Wad.

Public Service Commission Recruitment is made through the Union Public Service Commission.

Chief Secretary : P. P. Caprihan.

GOA, DAMAN AND DIU

Area : 3,813 sq km — *Population* : 8,57,771
Capital : Panaji — *Principal languages* : Marathi, Konkani and Gujarati

AGRICULTURE Irrigated area forms about 9.5 per cent of the total cultivated area. Rice is the main important food crop. Pulses and ragi and other food crops are grown. Production of rice in 1978-79 was 93,266

[1]As on 19 June 1979

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

tonnes. Other crops grown in small quantities include groundnut, maize, jowar and bajra. The main cash crops are sugarcane, coconut, cashewnut, arecanut and fruits like pineapple, mango and banana. The production of sugarcane during 1977-78 was 64,135 tonnes.

Forests cover 27.6 per cent of the total area.

INDUSTRY

The mineral wealth consists of iron ore, manganese, ferro-manganese, bauxite and silica sand. The mining industry contributes substantially to the economy of the territory employing over 25,000 persons. The estimated production of these minerals during 1977-78 was 125.84 lakh tonnes. The foreign exchange earning resulting from the export of ores was over Rs 77.56 crore during 1977-78.

Over two thousand small scale industries have been registered up to the end of 1979. They include workshops, bakeries, printing presses, saw mills, tyre retreading units, fruit and fish canning, cashewnut processing, mosaic tiles, soap manufacture, furniture, typewriter ribbons, carbon paper, automobile batteries, acrylic sheets, polythene bags, sodium silicate, fishing nets, zip fasteners, stoves, footwear, spectacle frames, chemical, stainless steelwares rice and flour mills, etc. The number of large and medium scale industries has increased to 28 with approximately Rs 138 crore and employment to about 5,000 persons.

There are seven industrial estates functioning at present, and two more are under way.

IRRIGATION AND POWER

Number of irrigation schemes such as lift irrigation schemes, bandharas, tanks etc., capable of irrigating about 1,200 hectares have been taken up. The irrigable area which was 8,580 hectares upto the end of the Fourth Plan, has been increased to 12,000 hectares, of which an area of 4,850 hectares would be from government schemes.

In addition to these minor irrigation schemes, a member of major irrigation schemes, viz. Salauli Irrigation Scheme and Anjunem Irrigation Scheme on a modern line with an irrigation potential of over 16,000 hectares will be completed soon.

Out of 409 villages, 351 have already been electrified up to 31 March 1979.

GOVERNMENT

Lt. Governor : Col. Partap Singh Gill

Council of Ministers[1]

Chief Minister : Pratapsing Roofi Rane
Cabinet Ministers : F. C. Sardinha, D. G. Narvenkar, S. H. Haroon and H. N. P. Zartye

Minister of State : J. S. Agular

Legislative Assembly[1]

Speaker : Froilano Machado
Dy. Speaker : Gauns Dessai

High Court

The Judicial Commissioner's Court has been declared as a High Court for the purpose of articles 132, 133 and 134 of the Constitution.

Judicial Commissioner : Tito Menezes
Addl. Judicial Commissioner : K. N. Mishra

[1]As on 25 February 1980.

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

Public Service Commission

Recruitment is made through the UPSC.

Chief Secretary : R. M. Agrawal

AREA, POPULATION AND HEADQUARTERS OF DISTRICTS

District	*Area (sq km)*	*Population (1971 census)*	*Headquarters*
1. Daman	72	38,739	Daman
2. Diu	40	23,912	Diu
3. Goa	3,701	7,95,120	Panaji

LAKSHADWEEP

Area : 32 sq km *Population* : 31,810
Capital : Kavaratti

AGRICULTURE

Coconut is the only major crop with a turnover of over Rs 1.12 crores a year. The area under coconut cultivation in 1978-79 was 2,780 hectares. There are dairies at Kavaratti and Minicoy and poultry farms at Androth, Kadmat, Kalpeni, Minicoy, Kavaratti, Agatti and Kiltan.

INDUSTRY

Fishing is the main industry. The sea around the islands is highly productive. It is particularly rich in tuna and shark varieties of fish. There are 178 mechanised boats in fishery operations at the end of 1979. There is a factory for canning tuna fish at Minicoy Island. There are boat-building yards at Kavaratti and Chetlat islands.

Coir spinning and coir yarn production are the main cottage industries with an annual turnover of Rs 6 to 7 lakhs. Coir products are exchanged for foodgrains and other consumer goods through government depots. Under coir monopoly scheme which is run by the administration on a no loss no profit basis for the benefit of the poorer sections and the scheduled tribes. There are four coir production-cum-demonstration centres one each in Kadmat, Amini, Kiltan, and Androth islands. There are defibering plants one each in Androth and Kadmat islands. There is a hosiery unit at Kalpeni island. A handicrafts society was started in 1974 at Kavaratti island. Two handicrafts training centres are functioning—one at Kavaratti, started in 1974 and the other at Kalpeni, started in 1979.

POWER

Out of ten inhabited islands, nine had been electrified by 1973-74. The installed capacity of generator sets in Lakshadweep on 31 December 1979 was 1,578 kw.

GOVERNMENT

Administrator : P. M. Nair

High Court

The jurisdiction of the Kerala High Court extends over Lakshadweep. For list of judges, see under Kerala.

Public Service Commission

Recruitment to group 'A' and 'B' posts is made through the Union Public Service Commission.

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

MIZORAM

Area : 21,087 sq km
Capital : Aizawl
Population : 3,32,390
Principal languages : Mizo and English

AGRICULTURE About 90 per cent of the people of Mizoram are engaged in agricultural pursuits. Out of about 60,000 families, 50,000 families are in agriculture, of which 10,000 are in the process of permanent settlement and 40,000 are still continuing shift cultivation. At present 5 per cent of the total area is under cultivation and a little over 1.5 per cent is made permanent cultivation. Irrigated area forms seven per cent of the total cultivated area. In the hill slopes, maize and paddy are cultivated. Other crops grown are pulses, sugarcane, chillies, ginger, tobacco, vegetables, turmeric, potato, banana and pineapple. Shift cultivation is ordinarily practised though terrace rice cultivation and wet rice cultivation practices have been taken up in recent years. Production of foodgrains in 1976-77 was about 58,245 tonnes ginger 20,360 tonnes, sugarcane 2,048 tonnes and potato 382 tonnes.

Nearly two-third of the area of the territory is covered with forests. Important forest products are timber, bamboo and *agar*.

INDUSTRY There is no major industry in Mizoram. Handloom and handicrafts are the cottage industries. Rice milling, oil and flour milling, mechanised bamboo workshops, saw milling, brick making, aluminium casting and furniture workshops are some of the small industries which have been established. A survey conducted in 1973-74 has established that there is sufficient raw material for establishing a paper-pulp project.

IRRIGATION AND POWER Schemes like the cementing for water points, construction of small reservoirs at the collection points in the streams or springs and some improvised way of bringing water as near the villages as possible are being implemented. Irrigation is difficult because of the mountainous terrain.

There are seven diesel powers stations to generate electricity mainly for domestic consumption at Aizawl, Lunglei, Lawngtlai, Champhai and Hnahthial. The total power generation capacity is estimated to be about 1,876 kw.

GOVERNMENT *Lt. Governor* : N. P. Mathur

Council of Ministers[1] *Chief Minister* : Brig. T. Sailo
Cabinet Ministers : Lalhmingthanga, Zairemthanga, P. B. Rosanga and F. Malsawma.

High Court The jurisdiction of Gauhati High Court extends over Mizoram.

Public Service Commission Appointment of Class I and II officers is made by the Lt. Governor.

Chief Secretary : A. J. Kundan

[1]As on 14 May 1980.

CC-0. Agamnigam Digital Preservation Foundation, Chandigarh

PONDICHERRY

Area : 480 sq km
Capital : Pondicherry
Population : 4,71,707
Principal languages : Tamil and French

AGRICULTURE

Nearly 45 per cent of population of Pondicherry is engaged in agricultural and other allied pursuits. Irrigated area forms about 89 per cent of the total cultivated area. Rice is the main food crop. Other crops grown in small quantities are jowar, bajra and ragi. Sugarcane, groundnut and cotton are the principal cash crops. Production of foodgrains in 1978-79 was 1,20,000 MT and sugarcane 2 lakh tonnes. Forests are practically non-existent.

INDUSTRY

There are 1,281 small scale industries of which electrical appliances, camphor, leather goods, wooden articles, electronic items, plastics, steel furniture and bicycle parts are the main industries. Besides there are ten medium and large industries including five textile mills. The government distillery at Pondicherry, expanded in 1973, manufactures industrial alcohol, bottled arrack and denatured spirit.

IRRIGATION AND POWER

There is no major irrigation project in Pondicherry. Some minor irrigation schemes include boring of wells.

There are no power generation projects. All the 333 villages were electrified by 26 March 1972 as against only 68 in 1954. For irrigation, 7,636 pumpsets/tube-wells had been energised by 31 December 1979.

GOVERNMENT

Lt. Governor : Bidesh Tukaram Kulkarni

Council of Ministers[1]

Chief Minister : D. Ramachandran
Cabinet Ministers : S. Savarirajan, G. Perumalraja, Smt Renuka Appadorai, V. M. C. Sivakumar, and V. Kadirvelu.

Legislative Assembly[1]

Speaker : M. O. H. Farook
Dy. Speaker : L. Joseph Mariadass

High Court

The jurisdiction of Madras High Court extends over Pondicherry. For list of Judges, see under Tamil Nadu.

Public Service Commission

Recruitment is made through the Union Public Service Commission.

Chief Secretary : P. V. Jaikrishnan

AREA, POPULATION AND HEADQUARTERS OF DISTRICTS

District	*Area (sq km)*	*Population (1971 census)*	*Headquarters*
1. Karaikal	161	1,00,042	Karaikal
2. Mahe	9	23,134	Mahe
3. Pondicherry	290	3,40,240	Pondicherry
4. Yanam	20	8,291	Yanam

[1]As on 3 May 1980

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

26 IMPORTANT EVENTS 1979

January

1 President Sanjiva Reddy inaugurates 'International Year of the Child' in New Delhi.

— First phase of Rs 36.50 crore Pazhassi irrigation project in Kerala inaugurated by the Prime Minister.

3 The Prime Minister inaugurates the 66 session of the Indian Science Congress at Hyderabad.

4 India agrees to supply 24,000 tonnes of rice to Mauritius, under an agreement signed in New Delhi.

5 Rohini-200, the first monsoon experimental rocket (MONEX), successfully launched from the Thumba rocket launching station.

9 Congress(I) wins Secunderabad and Siddipet Lok Sabha seats in Andhra Pradesh.

12 India and Austria sign in New Delhi a memorandum of understanding for cooperation in scientific and technological fields.

16 India wins the fourth cricket "test" at Madras against the West Indies by three wickets.

17 Seventh International Film Festival concludes in New Delhi. "The Hungarians" by Zoltan Fabri gets the Golden Peacock for the best feature film.

— Dr D. C. Pavate, former Governor of Punjab, dies at Bangalore.

— A five-year agreement for cooperation in science and technology between India and Bulgaria signed in New Delhi.

— East Bengal wins the Durand football final, defeating Mohan Bagan 3-0 in Delhi.

19 The 1978 Jawaharlal Nehru Award for Peace and International Understanding presented to Venerable Nichidatsu Fujii of Japan in New Delhi.

20 The 13 Jnanpith Award presented to Dr. K. Sivarama Karanth at Bombay.

22 A 12-day Commonwealth Conference on non-formal education begins in New Delhi.

— An Indo-Soviet agreement for scientific and technical cooperation in the peaceful utilisation of atomic energy signed in New Delhi.

23 A memorandum of understanding for parking communication satellite signed between India and Indonesia in New Delhi.

24 Charan Singh and Rabi Ray join union cabinet.

— World Sanskrit Conference begins at Allahabad.

— Three agreements for British grants to India totalling Rs 232 crore signed in New Delhi.

— Second World Hindu Conference begins at Allahabad.

26 Ram Kinkar, Narsing Yadav, Jagbir Singh and Janeshwar Mishra, sworn in as union ministers of state.

29 Jagannath Kaushal, Governor of Bihar, resigns.

— Fifth cricket 'test' between India and West Indies ends in a draw in New Delhi.

30 The Chief Election Commissioner holds that the Chikmagalur seat has fallen vacant following the expulsion of Smt Gandhi from the Lok Sabha.

— National Board of Adult Education meets in New Delhi.

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

31 An ordinance promulgated to provide for the appointment of a one-man tribunal by the government to decide the question of fixation or revision of wages of newspaper employees (working journalists and non-journalists) in the country.

February

3 Prime Minister Morarji Desai arrives in Colombo on a three day visit to Sri Lanka.

7 Khushabhau Thakre, Janata Party, wins the Khandwa Lok Sabha seat.

— National Police Commission presents its first interim report to H. M. Patel the Union Home Minister.

8 The sixth cricket 'test' between India and West Indies at Kanpur ends in a draw; India wins the 'Rubber' with a 1-0 win in the six test series.

— Rs 38.5 crore Pamba irrigation project at Vazhakkunnu in Kerala inaugurated.

9 Prime Minister Desai writes to President Carter saying that the proposed sale by France to China of two atomic reactors of American design amounted to discrimination.

10 Joginder Singh, former Governor of Rajasthan, dies at Bahraich (U.P.).

— President Sanjiva Reddy inaugurates the permanent capital of Arunachal Pradesh at Ita Fort, 12 km from Itanagar.

11 Prime Minister Desai declares cellular jail in Andaman and Nicobar Islands as a National Memorial.

12 Atal Bihari Vajpayee, Minister of External Affairs, arrives in Peking on an eight-day official visit.

— India recognises Iranian government headed by Mehdi Bazargan.

14 Union cabinet approves a 1,100 mw super thermal power station at Farakka in West Bengal.

15 U.P. Chief Minister Ram Naresh Yadav resigns.

17 25 National Games begin at Hyderabad.

20 Madhu Dandavate Minister of Railways, presents the third successive surplus railway budget.

21 New ministry headed by Darwin Diengdoh Pugh of All Party Hill Leaders Conference sworn in in Shillong.

23 Economic Survey for 1978-79 presented to Parliament.

26 First report of the committee on land reforms presented to the Lok Sabha.

— District and Sessions Judge of Delhi finds former Information and Broadcasting Minister, V. C. Shukla, and Sanjay Gandhi guilty of criminal conspiracy to destroy the film "Kissa Kursi Ka".

28 Banarsi Das sworn in as Chief Minister of Uttar Pradesh.

— Union budget for 1979-80 presented to Parliament.

March

1 Jairamdas Daulatram, former Governor of Assam and Bihar, dies in New Delhi.

— Admiral R. L. Pereira takes over as Chief of the Naval Staff.

3 President Sanjiva Reddy opens two-day conference of Governors in New Delhi.

5 United Kingdom apologises to the U. N. Human Rights Commission over the case of an Indian woman forced to undergo a virginity test at Heathrow airport, London.

— Prime Minister Morarji Desai opens three-day conference of Commonwealth Industry Ministers at Bangalore.

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

8 Contract for export of woollen knitwear worth Rs 31.1 crores from India to Soviet Union signed in New Delhi.
9 Soviet Prime Minister Alexei Kosygin arrives in New Delhi.
15 President Sanjiva Reddy presents Arjuna Awards to sportsmen and women in New Delhi.
— The Grover Commission, which inquired into allegations of corruption and favouritism against Karnataka Chief Minister, Devraj Urs, and some of his cabinet colleagues, submits its final report to the central government.
17 Japan extends to India a grant of Rs 12.5 crores as debt relief.
18 North Zone defeats West Zone and wins the Duleep Trophy cricket championship in New Delhi.
21 Prime Minister Morarji Desai presents the Medical Council Silver Jubilee Research Award 1978, Dr B. C. Roy National Awards 1978 and Hari Om Ashram Alembic Research Awards 1978, to doctors in New Delhi.
26 Union Information and Broadcasting Minister opens five-day session of UNESCO study commission on problems of communication in New Delhi.
28 Rajya Sabha adjourns *sine die*.
— Delhi wins Ranji Trophy cricket final beating Karnataka by 399 runs at Bangalore.

April

3 Former judge of the Supreme Court, A. N. Grover, nominated chairman of the new Press Council of India.
5 First Indian-built airport in a foreign country commissioned at Ghat in Libya on 3 April 1979.
6 India and the Soviet Union sign a rice-crude oil barter agreement in New Delhi.
9 S. Venkataraghavan selected Captain of the Indian Criket Team to tour United Kingdom.
— K. C. Sebastian (Kerala Congress), Thalekkunnil Basheer (Congress) and K. Chathunni Master (CPI-M) elected to Rajya Sabha from Kerala.
13 Doordarshan Kendra inaugurated in Jullundur.
14 National UNESCO Award for 1978 presented to M. C. Chagla at Bombay.
15 Prime Minister Morarji Desai inaugurates 86.44 kilometre-long broad gauge Trivandrum—Kanayakumari rail line.
16 Prime Minister Morarji Desai and Atal Behari Vajpayee arrive in Dacca on a 2 day visit.
19 Karpoori Thakur, Bihar Chief Minister, resigns.
— 16.8 tonnes of US uranium for the Tarapur atomic power station reportedly arrives at Bombay.
— Two agreements signed in New Delhi with British Aerospace Corporation on the import and manufacture in this country, of Jaguar, the deep penetration strike aircraft, for the Indian Air Force.
20 Prime Minister Morarji Desai distributes Ghalib Awards (eight) for 1976-77 in New Delhi.
21 Two-man Bihar ministry with Ram Sunder Das as Chief Minister sworn in at Patna.
23 India and Syria sign an agreement in New Delhi for the operation of air services between the two countries.
24 Minister of External Affairs, Atal Behari Vajpayee, meets President Carter in Washington.

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

26 Goa Chief Minister Smt Shashikala Kakodkar resigns.
— President Sanjiva Reddy inaugurates the 26 National Film Festival and presents film awards in New Delhi. Dada Saheb Phalke award presented to R. C. Boral, musician.
28 Goa, Daman and Diu brought under President's Rule.
29 People's Conference gets absolute majority in Mizoram elections and captures 17 out of 33 assembly seats.
30 44 Constitution Amendment Bill receives the President's assent and becomes an Act with immediate effect.

May

1 President Sanjiva Reddy distributes 93 National Awards to teachers for 1978 in New Delhi.
4 India and Bangladesh sign an agreement in New Delhi under which India is to lend 50,000 tonnes of wheat and 1,50,000 tonnes of rice to Bangladesh.
7 13 member Meghalaya Ministry led by Brington Buhai Lyngdoh of United Meghalaya Parliamentary Democratic Forum sworn in in Shillong.
8 Lok Sabha passes the 'Special Courts Bill' with all the four amendments made by Rajya Sabha.
— Five-man People's Conference ministry led by Brig. Sailo sworn in in Aizawal, Mizoram.
— India to get 26 lakh tonnes of crude from Iran under an agreement signed in Tehran.
9 Second and the final report of the Grover Commission of Inquiry laid on the table of Lok Sabha.
10 President's rule in Pondicherry extended by another six months from 12 May.
11 Agricultural Prices Commission recommends procurement price of Rs 90 a quintal for all the common varieties of paddy for the 1979-80 market season.
15 Committee on Controls and Subsidies submits its report to Deputy Prime Minister Charan Singh.
16 Union Government fixes minimum wage for coal mine workers.
17 President Sanjiva Reddy gives his assent to the Special Courts Bill.
19 Deputy Prime Minister Jagjivan Ram opens a Rs 60.00 crore field gun factory at Panki (Kanpur).
— Hazari Prasad Dwivedi, Hindi scholar and critic, dies in New Delhi.
— Conference of State Chief Ministers begins discussions on the recommendations of the Asoka Mehta Committee on Panchayati Raj in New Delhi.
— Posts and Telegraphs Department announces revised tariffs with effect from 1 June 1979.
20 Railway Minister Madhu Dandavate opens 190-kilometre Mangalore-Hassan railway line.
23 India and Algeria sign in New Delhi a memorandum of understanding on cooperation in the field of railways.
24 Mohinder Singh Gill (Cong-I) elected to Lok Sabha from Ferozepur.
25 An Army expedition climbs 7,584-metre Saser Kangri peak in Ladakh in two groups on 22 and 24 May.
29 External Affairs Minister Atal Behari Vajpayee returns to New Delhi after his tour of Iraq, Syria, Kuwait and the United Arab Emirates.

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

— Ravi Nandan Singh, Janata Party, wins the Sidhi Lok Sabha by-election.
31 Justice Mohinder Singh Joshi and Justice Mangi Lal Jain appointed judges of the two special courts set up in New Delhi.
— The Hindustan Machine Tools to set up a machine tool complex in Nigeria under a protocol signed in New Delhi.

June
1 India and Angola decide to establish diplomatic ties.
— An agreement on 'development cooperation' which provides for Swedish grant of Rs. 110.69 crore to India for 1979 signed in New Delhi.
2 A protocol on defence cooperation between India and Bulgaria signed in Sofia.
4 22 meeting of the International Committee on Space Research opened by the Prime Minister at Bangalore.
6 Chief Ministers' conference to discuss police problems held in New Delhi.
7 India's second satellite *"Bhaskar"* launched from a Soviet cosmodrome.
8 The Aid-India Consortium pledges to provide $ 300 crore as development aid for 1978-79.
10 Prime Minister Morarji Desai leaves New Delhi for a three-day visit to the Soviet Union; arrives in Tashkent.
12 Indo-Soviet protocol for the construction of a 30.00 lakh tonne capacity steel plant at Vishakhapatnam, signed in Moscow.
14 Special court proceedings for Emergency excesses begin.
15 Three new loans totalling Rs 600 crore floated by the central government.
18 S. Singaravadivelu, Congress(I) and K. Murugaiyan, CPI win the Thanjavur and Nagapattinam (SC) Lok Sabha seats respectively.
22 Prime Minister Morarji Desai returns to New Delhi after touring the Soviet Union, Poland, Czechoslovakia and Yugoslavia.
28 An eight-member Haryana ministry headed by Bhajan Lal sworn in in Chandigarh.
30 India and USA sign two agreements in New Delhi, providing for American aid worth Rs 54.5 crores for Indian development projects.

July
1 Public distribution system launched in the states and union territories.
— Prime Minister Morarji Desai opens a 200 mw unit of the Satpura thermal power station near Sarni (MP).
4 An ordinance promulgated to put off repayment of instalments of compulsory deposits due on 6 July.
7 Ramesh Krishnan wins the junior boys singles title of the Wimbledon Tournament beating David Siegler (US).
8 Union government outlaws the Mizo National Front and its allied organisations.
9 Monsoon session of Parliament begins.
10 Leader of the Congress Parliamentary Party, Y. B. Chavan, recognised as leader of the Opposition in the Lok Sabha.
11 Opposition leader Y. B. Chavan tables no confidence motion against the Desai government in the Lok Sabha.

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

13 H. N. Bahuguna, Fazlur Rahman, Zulfiqarullah and Ram Kinkar resign from the central cabinet.

14 16-member Assam ministry headed by Gopal Chandra Borbora sworn in.

15 Prime Minister Morarji Desai submits his resignation to the President, who ask him to continue in office until alternative arrangements are made.

— George Fernandes, Purushottamlal Kaushik, Bhanu Pratap Singh resign from the central cabinet.

16 Both Houses of Parliament adjourned *sine die*.

— Deputy Prime Minister Charan Singh resigns from the central cabinet and Janata Party and is elected leader of the Janata (Secular).

— Syed Shahabuddin and Bramha Dev Ram Shastri elected to the Rajya Sabha from Bihar.

— India loses first cricket "test" match against England by an inning and 83 runs at Edghaston.

— International Development Association approves $ 25 crore loan to India to help farmers to increase food production.

18 The President asks Y. B. Chavan to "explore the possibility of forming a cohesive and stable alternative government.

19 India receives the first two of a batch of Jaguar aircraft ordered from the British Aerospace Corporation.

22 Y. B. Chavan reports his failure to the President to form an alternative government.

23 President issues letters to Morarji Desai and Charan Singh asking them to submit by 25 July lists of their supporters in the Lok Sabha.

24 Union cabinet approves Rs 13.5 crore liquified Petroleum gas project to be located at Dulijan in Assam.

25 S. S. Barnala and D. S. Gulshan resign from the central cabinet.

26 The President invites Charan Singh to form a new government and also asks him to seek a vote of confidence in the Lok Sabha "at the earliest possible opportunity, say, by the third week of August".

— Iraq to supply about 60 lakh tonnes of crude to India in 1979.

27 Morarji Desai resigns from Janata Parliamentary Party leadership. Jagjivan Ram elected leader of the Janata Parliamentary Party.

28 Charan Singh sworn in as Prime Minister of India's first coalition government alongwith eight other ministers, Y. B. Chavan (Congress) designated Deputy Prime Minister with Home portfolio.

— Lok Sabha Speaker recognises Jagjivan Ram as Leader of Opposition in the Lok Sabha.

30 Ten cabinet ministers and seven ministers of state added to the union cabinet, Portfolio allocation is; External Affairs to Shyam Nandan Mishra; Finance to H. N. Bahuguna; Defence to C. Subramaniam; Industry to K. Brahamananda Reddi; Health and Family Welfare to Rabi Ray; Labour to Mohammed Shafi Qureshi; Steel, Mines and Coal to Biju Patnaik; Petroleum, Chemicals and Fertilizers and Railways to T. A. Pai; Energy to K. C. Pant; Law, Justice and Company Affairs to H. R. Khanna; Works, Housing, Supply and Rehabilitation to Ram Kinker; Information and Broadcasting to Purushottam Kaushik; Education, Social Welfare and Culture to Dr Karan iSngh; Agriculture and Irrigation to Brahm Perkash; Tourism and Civil Aviation to Fazlur Rehman; Communication and Muslim Wafks to Zulfiqarullah; Independent Charge

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

of Shipping and Transport to Janeshwar Mishra, minister of state, Independent charge of Rural Reconstruction to Bhanu Pratap Singh, minister of state.

— A new Central Ministry of Rural Reconstruction created.

31 Portfolio of Mohammed Shafi Qureshi and Fazlur Rehman changed. Qureshi gets Tourism and Civil Aviation and Fazlur Rehman Labour and Parliamentary Affairs.

— Tukaram Sadashiv Shrangare sworn in as union minister of state.

— External Affairs Minister S. N. Mishra leaves New Delhi to attend the Commonwealth Conference in Lusaka, Zambia.

August

1 41-nation Commonwealth Conference opens in Lusaka.

— Minister for Law, Justice and Company Affairs, H. R. Khanna resigns from the council of ministers.

— Former Chief Justice of India and Congress (I) nominee Hidayatullah accepted as the 'Consensus' candidate for the office of Vice-President at a meeting of various political parties called by the Prime Minister.

— Indian couple Dr Rajanikant Arole and Dr Mabelle Arole win Magasaysay Award for Community leadership for bringing modern medicine to thousands of deprived villagers in west-central India.

— S. N. Kacker sworn in as Union Minister of Law, Justice and Company Affairs.

4 Nine more ministers of state sworn in, raising the strength of union council of ministers to 36.

— Indian Airlines Avro plane with 45 abroad crashes near Bombay.

6 Jagbir Singh gets Defence and Dhanik Lal Mandal appointed as minister of state for Home Affairs.

— Second cricket 'test' match between India and England ends in a draw at Lords, London.

9 Hidayatullah declared elected as the new Vice-President of India.

10 Satellite Launch Vehicle (SLV-Three), making the first of the three fights fails to carry its 40-kg technological payload into the earth's orbit. The 22-metre-high four stage rocket pulmmet into the sea, five minutes and 15 second after take off.

11 India and Canada sign a memorandum of understanding in New Delhi under which Canada will provide India rapeseed oil worth Rs 10.5 crore as a grant during 1979-80.

— India agrees to give a loan of Rs 18 crore to Sri Lanka this year.

13 Union government decides to withdraw the Ordinance prohibiting strike and go-slow in the Reserve Bank and to allow another Ordinance, postponing repayment of compulsory deposit account instalments to lapse.

— Sikkim Assembly dissolved.

— India agrees to provide financial assistance of Rs 17.65 lakh for the expansion of a maternity and child welfare centre in Kathmandu, Nepal.

17 Sikkim Chief Minister Kazi Lhendup Dorji resigns.

18 V. P. Naik, former Maharashtra Chief Minister, dies in Singapore.

— President's rule imposed in Sikkim.

19 Bala Pajanor and Smt Satyavani Muthu of the AIADMK sworn in as union cabinet ministers raising the strength of the union cabinet to 38.

20 Prime Minister Charan Singh tenders the resignation of his council of ministers to the President and advises him to dissolve the Lok Sabha.

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

— Both Houses of Parliament adjourned *sine die*.

21 Under an agreement reached recently, China is to import 3,200 bales of cotton valued over Rs 7 crore directly from the Cotton Corporation of India.

— Third cricket 'test' match between India and England ends in a draw at Headingley, England.

— President Sanjiva Reddy dissolves the sixth Lok Sabha and orders fresh elections. Charan Singh's government to continue in office until a new government is formed after the elections.

22 India and Sri Lank sign an agreement in New Delhi under which India is to extend a credit of Rs 10 crore to Sri Lanka to finance the export of capital and intermediate goods.

— Prime Minister Charan Singh opens a four-day national conference on "medical and health education" in New Delhi.

— Mrinal Sen's film "Parasuram" wins silver medal in the 11 International Film Festival in Moscow.

30 President, Sanjiva Reddy promulgates Payment of Bonus (Amendment) Ordinance 1979.

31 M. Hidayatullah sowrn in as Vice-President of India.

September

4 Governor of Assam accepts the resignation of Chief Minister Golap Borbora.

— India and England draw the fourth and last cricket 'test' match at Oval in London.

6 Chief Minister of Arunachal Pradesh, Prem Khandu Thungon resigns.

7 Union government releases the Gupta Commission report on Maruti.

9 An eight-member Assam ministry headed by Jogendra Nath Hazarika sworn in at Dispur.

12 Union government fixes ex-factory price of sugar between Rs 260 and 270 a quintal and the retail price between Rs 2·90 and Rs 3 under the Sugar (Price Control) Order issued under the Essential Commodities Act.

— Reserve Bank of India increases lending interest rates effective from 13 September 1979.

— Devraj Urs succeeds Swaran Singh as president of the Indian National Congress.

14 Union cabinet clears three new coal projects to be located in Maharashtra, Madhya Pradesh and Bihar.

16 Mohan Bagan wins Indian Football Association Shield defeating East Bengal.

— First cricket 'test' match between India and Australia ends in a draw at Madras.

18 A five-member Arunachal Pradesh Ministry headed by Tomo Riba of the United People's Party sworn in at Itanagar.

18 Prime Minister Charan Singh opens the 32 session of the World Health Organisation's Regional Committee for South-East Asia, in New Delhi.

19 King Birendra and Queen Aishwarya of Nepal arrive in New Delhi on a six-day official visit.

20 Dr A. R. Kidwai sworn in as Governor of Bihar.

— Captain of the Indian cricket team, Sunil Gavaskar becomes the only player in the Indian-sub-continent to cross 5,000 runs in test cricket.

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

22 Kharif procurement price of 'fine' and 'superfine' paddy fixed at Rs 99 and Rs 103, a quintal respectively.

— Prakash Padukone wins men's singles title of the first Open Badminton Tournament beating Morten Frost Hansen (Denmark) in London.

24 Second cricket 'test' match between India and Australia ends in a draw at Bangalore.

25 The President promulgates an ordinance to ban company donations, in any form, to political parties.

26 Janata(S) headed by Raj Narain, socialist Groups of Madhu Limaye, George Fernandes and Biju Patnaik launch a new party named 'Lok Dal'. Prime Minister Charan Singh becomes president of the new party and appoints Raj Narain its 'working president'.

— Jammu and Kashmir Assembly becomes the first legislature in the country to adopt the anti-defection bill.

28 Iraq agrees to sell India 100,000 tonnes of diesel and kerosene in next three months in addition to normal supplies of petroleum products under a long term agreement.

October

4 India's cricket Captain Sunil Gavaskar crosses 1000 runs in the calendar year 1979 for the third time and becomes the only batsman in the world to achieve this record.

5 President promulgates 'Prevention of Blackmarketing and Maintenance of Supplies of Essential Commodities Ordinance, 1979".

— Union government fixes a statutory minimum price of Rs 12.50 per quintal for sugarcane.

7 Kerala Chief Minister, P. K. Vasudevan Nair resigns.

— India wins third cricket 'test' match against Australia by 153 runs at Kanpur.

8 Jayaprakash Narayan dies in his house at Patna.

9 World Food Programme agrees to give India, a further Rs 46 crore worth of food aid to continue the supplementary nutrition feeding project.

— Supreme Court orders a general stay of executions of all death sentences throughout the country until further orders.

11 India and the International Fund for Agriculture Development sign in Rome a $ 50 lakh loan agreement.

12 C. H. Mohammad Koya of the Muslim League sworn in as Chief Minister of Kerala alongwith two other ministers.

14 Sikkim Janta Parishad secures absolute majority in the second general elections to the 32-member assembly.

16 India wins third and final hockey test 3-1 at Ludhiana and also the series against Soviet Union.

17 1979 Nobel Peace Prize awarded to Mother Teresa.

18 An eight-member Sikkim ministry headed by Nar Bahadur Bhandari sworn in in Gangtok.

— Fourth cricket 'test' match between India and Australia ends in a draw in New Delhi.

19 H. N. Bahuguna resigns from the union cabinet on a request from the Prime Minister.

20 The President approves the Contingency Fund of India (Amendment) Ordinance, raising the limit of the Fund to Rs 150 crore from Rs 50 crore.

26 Chief Election Commissioner, S. L. Shakdher, announces 3 and 6 January, 1980 as dates for polling to the seventh Lok Sabha.

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

— President's rule in the union territories of Goa, Daman and Diu and Pondicherry extended up to 15 January 1980.

31 Arunachal Pradesh Chief Minister, Tomo Riba, resigns and recommends dissolution of the assembly.

— Fifth cricket 'test' mach between India and Australia ends in a draw at Calcutta.

November

1 President Sanjiva Reddy inaugurates the first unit of the 10 mw thermal power station at Panipat.

3 The President dissolved the Arunachal Pradesh Assembly. Union territory comes under President's rule.

4 Oil and Natural Gas Commission strikes another off-shore oilfield near Bombay.

— World Bank to give loan of Rs 64 crore for the social forestry scheme of the Gujarat Government.

5 Bangladesh Rifles fire from across the border on Indian cultivators at Belonia in Tripura. 38 rounds fired from across the border in the past four days.

— Japan announces $ 1.06 crore aid to India to help it to enhance food production and improve the social environment.

7 India wins sixth and final cricket 'test' match by an inning and 100 runs at Bombay as also the first ever series won by India against Australia.

10 President Sanjiva Reddy opens India's First International Trade Fair in New Delhi.

— Vice-President Hidayatullah opens the International Children's Book Fair in New Delhi.

13 Union government announces productivity-linked bonus to railwaymen equal to 25 days wages with effect from the current financial year 1979-80 related to the base year 1977-78.

— Jawaharlal Nehru award for International Understanding for 1979' conferred on the South African freedom fighter Nelson Mandela.

— Jawaharlal Nehru Memorial Fund announces the award of Jawaharlal Nehru Fellowships to Dr G. P. Talwar, a biochemist and Dr T. R. Antharaman, a metallurgist.

14 President's Rule imposed in Manipur and state assembly dissolved.

15 India to export 5,000 tonnes of castor oil worth about Rs 5.8 crore to Soviet Union.

— India to export 18 lakh pair of shoes and shoe-uppers worth about Rs 16.5 crore in 1980 to the German Democratic Republic.

16 Union government decides to extend the scheme of productivity-linked bonus to the posts and telegraphs employees and announces its intention to introduce similar schemes for defence civilian workers.

— India and the Soviet Union sign an agreement in New Delhi under which India will export 1,55,000 tonnes of green coffee worth about Rs 50 crore to the Soviet Union in 1980.

— India to supply 30,000 pairs of shoes valued at Rs 14.56 lakhs to Bulgaria.

20 India and Bangladesh agree to take all possible steps to ensure that the causes of irritation and shooting across borders does not take place.

22 Agricultural Prices Commission recommends a support price of Rs 117 a quintal for wheat and Rs 145 a quintal for gram for the 1979-80 crop year.

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

23 Union government raises the limit on election expenses to Rs 1 lakh for a candidate for larger constituencies, Rs 75,000 for smaller constituencies, Rs 25,000 and Rs 50,000 for union territories.
— An agreement for the acquisition of the vertical take-off Sea Harriers for the Indian Navy's aircraft carrier, *Vikrant,* signed in New Delhi between India and British manufacturers of the aircraft.
26 First cricket 'test' match between India and Pakistan ends in a draw at Bangalore.
27 K. Brahmananda Reddy and P. Ankineedu Prasada Rao resign from the union government and the Congress Party.
— Three-member tribunal headed by Justice R. S. Bachawat submits its report to the union government on sharing of Godavari waters.
28 Kerala Chief Minister C. H. Mohammed Koya advises the Governor, to dissolve the state assembly.
— Agricultural Prices Commission recommends a support price of Rs 250 a quintal for mustard and rapeseed during the 1980-81 season.
— Mohan Bagan wins the Durand Cup (football) for the ninth time at Delhi.
30 Jagjivan Ram releases Janata Party manifesto.
— Kerala Governor dissolves the state assembly.
— Higher retail prices fixed for sugar ranging between Rs 3.10 and Rs 3.35 a kg for various regions in the country.
— 16 sportsmen and women awarded *Arjuna* Award for 1978-79 for outstanding sports performance.

December

1 Congress(I) election manifesto released by its president Smt Indira Gandhi.
3 Election Commission announces the poll schedule to the seventh general elections.
— Zulfiqarullah resigns from union government.
— Hockey wizard Major Dhyan Chand dies in New Delhi.
4 Prime Minister Charan Singh inaugurates the 23 session of International Atomic Energy Agency Conference in New Delhi.
5 President's Rule imposed in Kerala.
7 Congress Party issues its election manifesto.
— The Narmada Water Disputes Tribunal submits a further report to the union government.
— Japan extends to India a loan of Rs 22.7 crore for the Bombay off-shore oil field development project.
8 The President accepts the resignation of Haryana Governor Harcharan Singh Brar.
9 India International Trade Fair ends in New Delhi.
— Second cricket 'test' match between India and Pakistan ends in a draw in New Delhi.
— South Korea eliminates India from the 1980 Davis Cup by winning the Eastern Zone match in Seoul.
10 Mother Teresa receives 1979 Nobel Peace Prize in Oslo.
11 Lok Dal releases its election menifesto.
12 President's rule imposed in Assam and the assembly kept in suspended animation.
13 Dr Farooq Abdullah of the National Conference returns unopposed to the seventh Lok Sabha from Srinagar constituency.
14 Sahitya Akademi announces 22 literatures awards for 1979.
17 Union government re-introduces dual price system for sugar.

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

20 Holding that the Shah Commission had over-stepped its authority, the Delhi High Court quashed the prosecution of Smt Gandhi and Pranab Kumar Mukherjee for refusal to depose before the Commission.

— India wins the third cricket 'test' match by 131 runs against Pakistan at Bombay.

22 Bala Pajanor and Smt Satyavanimuthu resign from the union cabinet at the instance of the Prime Minister.

— Dr M. S. Mehta a distinguished educationist, scholar and diplomat selected for the 1979 Award of the National Federation of UNESCO Association in India.

— International Fund for Agricultural Development approves a loan of $ 5.5 crores to India.

23 Gauhati-Dhubri Passenger train crashes into stationary A. T. Mail between Patsala and Sarupeta stations killing 18 people.

— Prakash Padukone wins the men's singles title for the ninth consecutive year in 44 National Badminton Championship held at Jamshedpur.

24 Planning Commission releases the revised draft of the Sixth Five Year Plan.

26 India ends its 15 year-old ban on economic relations with Rhodesia.

— Reserve Bank of India's report on currency and finance for 1978-79 observes fall in national income.

— Bengal wins Santosh Trophy of the National Football Championship at Coimbatore.

28 Heavy firing by Bangladesh Rifles on the Muhurichar area and Belonia town in South Tripura district from across the border.

— India and Russia sign annual trade protocol for 1980 envisaging a trade turnover of about Rs 1,900 crore.

— Jnanpith award for 1978 presented to Sachchidanand Vatsayan (Ageya) at Calcutta.

— Under an agreement signed in New Delhi, Norway will provide 9,700 tonnes of urea worth Rs 1.65 crore to India.

30 Fourth cricket 'test' match between India and Pakistan ends in a draw at Kanpur.

— Indian Airlines win 49 All-India Obaidullah Khan Hockey Gold Cup at Bhopal.

31 Chief Election Commissioner reports that elections would be held in 524 of the 542 constituencies on 3 and 6 January 1980.

— India voices deep concern at the 'substantial involvement' of Soviet military forces in Afghanistan and the resumption of U.S. arms supply to Pakistan.

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

APPENDICES

1 PERSONNEL OF THE GOVERNMENT[1]

President.: Neelam Sanjiva Reddy
Vice-President: *M. Hidayatullah*

Members of Cabinet	*Portfolios*
1. Smt Indira Gandhi	Prime Minister (all ministries/Departments not specified below)
2. P. V. Narasimha Rao	External Affairs
3. Giani Zail Singh	Home Affairs
4. C. M. Stephen	Communications
5. Kamlapati Tripathi	Railways
6. R. Venkataraman	Finance
7. A. B. A. Ghani Khan Chaudhuri	Energy and Coal
8. Pranab Kumar Mukherjee	Commerce, Steel and Mines
9. Kedar Pande	Irrigation
10. Veerendra Patil	Petroleum, Chemicals and Fertilizers
11. V. P. Sathe	Information and Broadcasting and Supply and Rehabilitation
12. P.C. Sethi	Works and Housing
13. Shiv Shankar	Law, Justice and Company Affiairs
14. B. Shankaranand	Education and Health and Social Welfare
15. A.P. Sharma	Shipping and Transport and Tourism and Civil Aviation
16. V.C. Shukla	Civil Supplies
17. Bhishama Narain Singh	Parliamentary Affairs
18. Rao Birendra Singh	Agriculture and Rural Reconstruction
19. Narayan Datt Tiwari	Planning
Ministers of State	
20. T. Anjiah	Labour
21. Z.R. Ansari	Commerce and Civil Supplies
22. Charanjit Chanana	Industry
23. Chandulal Chandrakar	Tourism and Civil Aviation
24. Sita Ram Kesari	Parliamentary Affairs
25. Nihar Ranjan Laskar	Health
26. Vikram Mahajan	Energy
27. Yogendra Makwana	Home Affairs
28. Kartik Oraon	Communications
29. C.K. Jaffar Sharief	Railways
30. Buta Singh	Shipping and Transport
31. C.P. N. Singh	Defence and Departments under the charge of Prime Minister
32. Dalbir Singh	Petroleum, Chemicals and Fertilizers
33. Smt Ram Dulari Sinha	Information and Broadcasting
34. R. V. Swaminathan	Agriculture
35. P. Venkatasubbaiah	Home Affairs and Department of Parliamentary Affairs
Deputy Ministers	
36. Mohammad Usman Arif	Works and Housing
37. Maganbhai Barot	Finance
38. Vijay N. Patil	Departments of Science and Technology and Space
39. Mallikarjun	Railways
40. P. Venkata Reddy	Industry
41. P. K. Thungon	Supply and Rehabilitation.

[1]Appendix to Chapter 3. As on 9 June 1980.

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

2. MEMBERS OF PARLIAMENT[1]

RAJYA SABHA (COUNCIL OF STATES)[2]

Chairman : M. Hidayatullah

Deputy Chairman : Shyam Lal Yadav

Andhra Pradesh (18)

1. Syed Ali Rahmat
2. V. B. Raju
3. Venigalla Satyanarayana
4. Krishna Mohan Bhamidipati
5. V. C. Kesava Rao
6. Mohammad Rahamathulla
7. A. S. Chowdhari
8. K. L. N. Prasad
9. Palavalasa Rajasekharam
10. Smt Roda Mistry
11. M. R. Krishna
12. G. Swamy Naik
13. T. Anjiah
14. Ghouse Mohiuddin Sheikh
15. N. P. Chengalraya
16. Buddha Priya Maurya
17. Chadalavada Venkatarao
18. B. Satyanarayan

Assam (7)

19. Biswa Goswami
20. Bipinpal Das
21. Syed Abdul Malik
22. Bijoy Krishna Handique
23. Ajit Kumar Sharma
24. Robin Kakati
25. Dinesh Goswami

Bihar (22)

26. Ashwani Kumar
27. Smt Aziza Imam
28. Ramchandra Bharadwaj
29. Syed Shahabuddin
30. Dharamchand Jain
31. Indradeep Sinha
32. Bhola Prasad
33. Bhola Paswan Shastri
34. Sitaram Kesri
35. Smt Manorma Pandey
36. Ramanand Yadav
37. Bhishma Narain Singh
38. Smt. Pratibha Singh
39. Ram Bhagat Paswan
40. Yogendra Sharma
41. Mahendra Mohan Mishra
42. Ram Lakhan Prasad Gupta
43. A. P. Sharma
44. Dayanand Sahaya
45. Hukamdeo Narayan Yadav
46. J. K. P. N. Singh
47. Shiva Chandra Jha

Gujarat (11)

48. Yogendra Makwana
49. Lal K. Advani
50. Smt. Kumudben Manishanker Joshi.
51. Harisinh Bhagubava Mahida
52. Ibrahim Kalaniya
53. Prof. Ramlal Parikh
54. Viren J. Shah
55. Golandaz M. Hussain
56. Piloo Mody
57. Manubhai Patel
58. Ghanshyambhai Oza

Haryana (5)

59. Sushil Chand Mohunta
60. Hari Singh Nalwa
61. Sujan Singh
62. Sultan Singh
63. Dr. Sarup Singh

Himachal Pradesh (3)

64. Roshan Lal
65. Smt Usha Malhotra
66. Smt. Mohinder Kaur

Jammu and Kashmir (4)

67. Om Mehta
68. Sharief-ud-Din Shariq
69. Gulam Mohiud-Din Shawl
70. Tirath Ram Amla

Karnataka (12)

71. Smt Monika Das
72. R. M. Desai

[1]Appendix to Chapter 3.
[2]As on 21 July, 1980.

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

73. Mulka Govinda Reddy
74. Smt. Margaret Alva
75. B. Ibrahim
76. Maqsood Ali Khan
77. K. S. Malle Gowda
78. F. M. Khan
79. M. Maddanna
80. M. Basavaraju
81. Ramakrishna Hegde
82. Satchidananda

Kerala (9)

83. C. Haridas
84. K. C. Sabastian
85. O. J. Joseph
86. K. Chathunni Master
87. B. V. Abdulla Koya
88. T. Basheer
89. K. K. Madhavan
90. Pattiam Rajan
94. S. Kumaran

Madhya Pradesh (16)

92. Nand Kishore Bhatt
93. J. K. Jain
94. Shrikant Verma
95. Balram Das
96. Smt. Ratan Kumari
97. Smt. Maimoona Sultan
98. Pyarelal Khandelwal
99. Gurudev Gupta
100. Sawaisingh Sisodia
101. Pravin Kumar Prajapati
102. Baleswar Dayal
103. Ladli Mohan Nigam
104. Smt. Vijaya Raje Scindia
105 Dr. Bhai Mahavir
106. Bhagatram Manhar
107. Ishwar Singh Rajendra Singh

Maharashtra (19)

108. Vacant
109. S. W. Dhabe
110. Murlidhar Chandra Kant Bhandare
111. S. K. Vaishampayen
112. Prof. N. M. Kamble
113. Smt. Premilabai Dajesaheb Chavan
114. Smt. Saroj Khaparde
115. Shanti Girdhar Lal Patel
116. Smt. Sushila Shankar Adivarekar
117. Joseph Leon Alban D'Souza
118. Smt. Nazema Akbarali Heptula
119. Govindrao Ramchandra Mahaisekar
120. A. G. Kulkarni
121. B. D. Khobragade
122. Dr Rafiq Zakaria
123. N. K. P. Salve
124. Ganapat Hiralal Bhagat
125. Sudashiv Bagaitkar
126. Vacant

Manipur (1)

127. Ng. Tompok Singh

Meghalya (1)

128. Alexander Warjri

Nagaland (1) ..

129. T. Aliba Imti

Orissa (10)

130. Patitpaban Pradhan
131. Narasingha Prasad Nanda
132. Santosh Kumar Sahu
133. Akshay Panda
134. Jagdish Jain
135. Shyam Sundar Mohapatra
136. Dhaneshwar Majhi
137. B. C. Pattanayak
138. Surendra Mohanty
139. Harekrushna Mallick

Punjab (7)

140. Harvendar Singh Hanspal
141. Smt. Amarjit Kaur
142. Sat Paul Mittal
143. Jagdev Singh Taiwandi
144. Gurcharan Singh Tohra
145. Harikishan Singh Surjeet
146. Smt. Rajinder Kaur

Rajasthan (10)

147. Dhuleshwar
148. Smt. Ushi Khan
149. Swami Dinesh Chandra
150. Mohammed Usman Arif
151. Ram Niwas Mirdha
152. Jaswant Singh
153. Molana Hsraul Haq
154. Hari Shankar Bhabhra
155. Bhim Raj
156. R. R. Morarka

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

Sikkim (1)

157. Leonard Soloman Saring

Tamil Nadu (18)

158. U.R. Krishnan
159. Murasoli Marafl
160. Ganesan
161. M. Kalyanasundaram
162. P. Ramamurti
163. R. Mohanarangam
164. A. P. Janardhanam
165. G.K. Moopanar
166. R. Ramakrishnan
167. Smt. Noorjehan Razack
168. D. Heerachand
169. M. S. Ramachandram
170. A. Anbalgan
171. V. Gopalsamy
172. Smt Sathivani Muthu
173. Era Sezhiyan
174. M. Moses
175. V. Venka

Tripura (I)

176. Smt Ila Bhattacharya

Uttar Pradesh (34)

177. Dr M.M.S. Siddhu
178. Krishna Nand Joshi
179. Kalpnath Rai
180. Dharam Vira
181. Devendra Nath Dwivedi
182. Piare Lall Kureel *urf* Piare Lall
183. Suresh Narain Mulla
184. Satya Pal Malik
185. Asad Madani
186. Nar Singh Narain Pandey
187. Nageshwar Prasad Shahi
188. Prakash Mehrotra
189. Bhagwan Din
190. Smt. Hamida Habibullah
191. Dinesh Singh
192. Sudhakar Pandey
193. Ram Sewak Chandhary
194. Syed Sibte Razi
195. Abdul Rehman Sheikh
196. Kalraj Mishra
197. K.C. Pant
198. Jagdish Prasad Mathur
199. G. C. Bhattacharya
200. Rameshwar Singh
201. Lakhan Singh
202. Surendra Mohan
203. M.R. Shervani
204. Narendra Singh
205. Dr Rudra Pratap Singh
206. Vacant
207. Bhanu Pratap Singh
208. Sunder Singh Bhandari
209. P. N. Sukul
210. Vacant

West Bengal (16)

211. Prasenjit Barman
212. Jaharlal Banerjee
213. Sangdopal Lepeha
214. Phanindra Nath Hansda
215. Bhupesh Gupta
216. Kalyan Roy
217. Prof D.P. Chattopadhyaya
218. Smt Purabi Mukhopaddhay
219. Sankar Ghose
220. Smt Pratima Bose
221. Pranab Mukherjee
222. Ahmad Hossan Mondal
223. Amarprosad Chakraborty
224. Smt Kanak Mukherjee
225. Syed Shahedullah
226. Prof Sourendra Bhattacharjee

Arunachal Pradesh (1)

227. Ratan Tama

Delhi (3)

228. Khurshed Alam Khan
229. Jagannath Rao Joshi
230. Charanjit Chanana

Mizoram (1)

231. Lalsawia

Pondicherry (1)

232. V.P. Munusamy

Nominated by the President (12)

233. Prof Rasheeduddin Khan
234. B.N. Banerjee
235. Bishambhar Nath Pande
236. Dr Lokesh Chandra
237. Smt Maragatham Chandrasekhar
238. Khuswant Singh
239. Scato Swu
240. Smt Nargis Dutt
241. Smt Fathema Ismail
242. Dr Malcolms Adiseshiah
243. Bhagwati Charan Varma
244. Pandurang Dharamaji Jadhav

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

LOK SABHA (HOUSE OF THE PEOPLE)

(As on 1 March. 1980)

Speaker : Bal Ram Jakhar

Deputy Speaker : B. Lakshmanan

S. No.	Constituency	Name of the Member	Party[1]
	Andhra Pradesh (42)		
1.	Adilabad .	G. Narsimha Reddy	Cong.(I)
2.	Amalapuram (R)	Kusuma Krishan Murhy	Cong (I)
3.	Anakapalli	S.R.A.S. Appalanaidu	Cong.(I)
4.	Auantapur	Darur Pullaiah	Cong.(I)
5.	Bapatla	Ankineedu Prasad Rao	Cong.(I)
6.	Bhadrachalam(R)	Smt. B. Radhabai Ananda Rao	Cong.(I)
7.	Bobbili	P.V.G. Raju	Cong.(I)
8.	Chittoor	P. Rajagopal Naidu	Cong.(I)
9.	Guddapah	K. Obul Reddy	Cong.(I)
10.	Eluru	Subba Rao Choudhary Chitturi	Cong.(I)
11.	Guntur	N.G. Ranga	Cong.(I)
12	Hanamkonda	P. V. Narasimha Rao	Cong.(I)
13	Hindupur	P. Bayapa Reddy	Cong.(I)
14	Hyderabad	K. S. Narayana	Cong.(I)
15	Kakinada	M.S. Sanjeevi Rao	Cong.(I)
16.	Karim Nagar	M. Satyanarayana Rao	Cong.(I)
17.	Khammam	Jalagam Kondala Rao	Cong.(I)
18.	Kurnool	K. Vijaya Bhaskara Reddy	Cong.(I)
19.	Machilipatnam	M. Ankineedu	Cong.(I)
20.	Mahbubnagar	Mallikarjun	Cong.(I)
21.	Medak	Smt. Indira Gandhi	Cong.(I)
22.	Mirya guda	G.S. Reddy	Cong.(I)
23.	NagarKurnool(R)	A.R. Mallu	Cong.(I)
24.	Nalgonda	T. Damodhar Reddy	Cong.(I)
25.	Nandyal	P. Venkatasubaiah	Cong.(I)
26.	Narasapur.	Subash Chandra Bose	Cong.(I)
27.	Narasaraopet	K. Brahmananda Reddy	Cong,(I)
28.	Nellore(R)	D. Kamakshaiah	Cong.(I)
29.	Nizamabad	M. Ramgopal Reddy	Cong.(I)
30.	Ongole	P. Venkata Reddy	Cong.(I)
31.	Paravathipuram (R)	V. Kisolre Chandra S. Deo	Cong.(I)
32.	Peddapalli (R)	K. Rajamallu	Cong.(I)
33.	Rajahmundry	S.B.P. Pattabhiramarao	Cong.(I)
34.	Rajampet	P. Parthasarathy	Cong.(I)
35.	Secunderabad	P. Shiv Shankar	Cong.(I)
36.	Siddipet (R)	Nandi Yellaiah	Cong.(I)

[1]The abbreviations used are: Janta party (Janata), Congress Party (Indira) [Cong.(I)], Congress party (Urs) [Cong. (U)] Communist Party of India (Marxist) [CPI (M)]; All India Anna Dravida Munnetra Kazhagam (AIADMK); Other Parties: (i) Communist Party of India (CPI); (ii) Revolutionary Socialist Party (RSP); (iii) Forward Bloc (FB); (iv) Muslim League (ML) (v) Jammu and Kashmir National Conference (NC); (VI) Unattached (UA) (vii) Dravida Munnetrs Kazhagam (viii) Janata Party (Secular) Janata(S) R: Reserved seats.

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

S. No.. Constituency	Name of the Member	Party
37. Srikakulam	Rajagopala Rao Boddepalli	Cong.(I)
38. Tenali	M. Nageswararao	Cong.(I)
39. Tirupathi (R)	Pasala Penchalaiah	Cong.(I)
40. Vijayawada	Smt. Chenupati Vidya	Cong.(I)
44. Visakhapatnam	K.A. Swami	Cong.(I)
42. Warrangal.	Kamaluddin Ahmed	Cong.(I)
Assam (14)		
43. Autonomous Districts (R)	Vacant	
44. Barpeta		
45. Dhubri		
46. Dibrugarh		
47. Gauhati		
48. Jorhat		
49. Kaliabor		
50. Karimganj (R)	Nihar Laskar	Cong.(I)
51. Kokrajhar (R)		
52. Lakhimpur	Vacant	
53. Mangaldoi		
54. Nowgong		
55. Silchar	Santos Mohan Dev	Cong.(I)
56. Tezpur	Vacant	Cong.(I)
Bihar (54)		
57. Araria (R)	D.L. Baitha	Cong (I)
58. Arrah	Chandradeo Prasad Verma	Janata(S)
59. Aurangabad	Satyendra Narain Sinha	Janata
60. Bagaha(R)	Bhola Raut	Cong(I)
61. Balia	Surya Narayan Singh	CPI
62. Banka	Chandra Shekhar Singh	Cong.(I)
63. Barh	Dharamvir Sinha	Cong.(U)
64. Begusarai	Smt Krishanar Sahi	Cong.(I)
65. Bettiah	Kedar Pandey	Cong.(I)
66. Bhagalpur	Bhagwat Jha Azad	Cong.(I)
67. Bikaramganj	Tapeshwar Singh	Cong.(I)
68. Buxar	Prof K.K. Tewary	Cong.(I)
69. Chapra	Prof Satya Deo Singh	Janta
70. Chatra	Ranjit Singh	Cong.(I)
71. Darbhanga	Hari Nath Mishra	Cong.(I)
72. Dhanbad	A.K. Roy	UA
73. Dumka (R)	Shibu Soren	UA
74. Gaya (R)	Ramswaroop Ram	Cong.(I)
75. Giridih	Bindeshwari Dubey	Cong.(I)
76. Godda	Samin Uddin	Cong.(I)
77. Gopalganj	Nagina Rai	Cong.(I)
78. Hajipur (R)	Ram Vilas Paswan	Janata (S)
79. Hazaribagh	Dr B. N. Singh	Janata
80. Jamshedpur	Rudra Pratap Sarangi	Janata
81. Jahanabad	Mahendra Prasad	Cong.(I)
82. Jhaniharpur	Dhanik Lal Mandal	Janata(S)
83. Katihar	Tariq Anwar	Cong.(I)

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

S. No.	Constituency	Name of the Member	Party
84.	Khagaria	Satish Prashad Singh	Cong. (I)
85.	Khunti (R)	N. E. Horo	UA
86.	Kishanganj	Jamilur Rehman	Cong. (I)
87.	Koderma	R. L. P. Verma	Janata
88.	Lahardaga (R)	Kartik Oraon	Cong. (I)
89.	Madhepura	R. P. Yadav	Cong. (U)
90.	Madhubani	Vacant	
91.	Maharajganj	Krishan Pratap Singh	Cong. (I)
92.	Monghyr.	D. P. Yadav	Cong. (U)
93.	Moti Hari	Kamla Mishra Madhukar	CPI
94.	Muzaffarpur	George Fernandes	Janata (S)
95.	Nalanda	Vijay Kumar Yadav	CPI
96.	Nawada (R)	Kunwar Ram	Cong. (I)
97.	Palamau (R)	Km. Kamla Kumari	Cong. (I)
98.	Patna	Ramavtar Shastri	CPI
99.	Purnea	Smt. Madhuri Singh	Cong. (I)
100.	Rajmahal (R)	Seth Hembram	Cong. (I)
101.	Ranchi	Shiv Prasad Sahu	Cong. (I)
102.	Rosera (R)	Baleshwar Ram	Cong. (I)
103	Saharsa	Kamal Nath Jha	Cong. (I)
104.	Samastipur	Prof. Ajit Kumar Mehta	Janata (S)
105.	Sasaram (R)	Jagjivan Ram	Janata
106.	Sheohar	Smt. Ramdulari Sinha	Cong. (I)
107.	Singhbhum (R)	Bagum Sumbrui	Janata
108.	Sitamarhi	B. R. Bhagat	Cong. (U)
109.	Siwan	Mohd. Yusuf	Cong. (I)
110	Vaishali	Smt. Kishori Sinha	Janata
	Gujrat (26)		
111.	Ahmedabad	Barot Maganbhai	Cong. (I)
112.	Amreli	Navin Ravani	Cong (I)
113.	Anand	Chavda Ishvarbhai Khedabhai	Cong. (I)
114.	Banskantha	Beervadan K. Gadhavi	Cong. (I)
115.	Baroda	R. P. Gaekwad	Cong. (I)
116.	Bhavnagar	G. B. Gohil	Cong. (I)
117.	Broach	Ahmed Mohammed Patel	Cong. (I)
118.	Bulsar (R)	U. H. Patel	Cong. (I)
119.	Chhota Udaipur (R)	Amarsinh Rathawa	Cong. (I)
120.	Dhandhuka	Narish Makwana	Cong. (I)
121.	Dohad (R)	Somjibhai Damor	Cong. (I)
122.	Gandhinagar	Amrit Patel	Cong. (I)
123.	Godhra	Jaideep Singh	Cong. (I)
124.	Jamnagar	Daulatsinhji Jadeja	Cong. (I)
125.	Junagadh	Mohanlal Patel	Cong. (I)
126.	Kaira	Ajitsinh Dabhi	Cong. (I)
127.	Kapadganj	Natvarsinh Solanki	Cong. (I)
128.	Kutch	Dr. Mahipatray M. Mehta	Cong. (I)
129.	Mandvi (R)	Chhitubhai Gamit	Cong. (I)
130.	Mehsana	Motibhai R. Chaudhari	Janata
131.	Patan (R)	Hiralal R. Parmar	Cong. (I)
132.	Porbandar	Maldevji M. Odedra	Cong. (I)

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

S. No.	Constituency	Name of the Member	Party
133.	Rajkot	Ramjibhai Mavani	Cong. (I)
134.	Sabarkantha	Shantubhi Patel	Cong. (I)
135.	Surat	C. D. Patel	Cong. (I)
136.	Surendranagar	Digvijay Sinh	Cong. (I)
	Haryana (10)		
137.	Ambala (R)	Suraj Bhan	Janata
138.	Bhiwani	Bansi Lal	Cong. (I)
139.	Faridabad	Tayyab Hussain	Cong. (I)
140	Hissar	Mani Ram Bagri	Janata (S)
141.	Karnal	Chiranji Lal	Cong. (I)
142.	Kurukshetra	Manohar Lal Saini	Janata (S)
143.	Mahendragarh	Birender Singh Rao	Cong. (I)
144.	Rohtak	Swami Indervesh	Janata (S)
145.	Sirsa (R)	Dalbir Singh	Cong. (I)
146.	Sonepat	Devi Lal	Janata (S)
	Himachal Pradesh (4)		
147.	Hamirpur	Prof. Narain Chand Parashar	Cong. (I)
148.	Kangra	Vikram Mahajan	Cong. (I)
149.	Mandi	Vacant	
150.	Simla (R)	Krishan Datt	Cong. (I)
	Jammu and Kashmir (6)		
151.	Anantnag	Ghulam Rasool Kochak	NC
152.	Baramulla	Khwaja Mubarak Shah	NC
153.	Jammu	G. L. Dogra	Cong. (I)
154.	Ladakh	Vacant	
155.	Srinagar	Dr. Farooq Abdullah	NC
156.	Udhampur	Dr. Karan Singh	Cong. (U)
	Karnataka (28)		
157	Bagalkot	Veerendra Patil	Cong. (I)
158.	Bangalore North	C. K. Jaffer Sharief	Cong. (I)
159.	Bangalore South	T. R. Shammanna	Janata
160.	Belgaum	S. B. Sidnal	Cong. (I)
161.	Bellary	R. Y. Ghorpade	Cong. (I)
162.	Bidar (R)	Narsing Rao Suryawanshi	Cong. (I)
163.	Bijapur	K. B. Chaudhari	Cong. (I)
164.	Chamarajanagar (R)	V. Sreenivasa Prasad	Cong. (I)
165.	Chikballapur	S.N. Prasann Kumar	Cong. (I)
166.	Chikkodi (R)	B. Shankaranand	Cong. (I)
167.	Chikmagalur	D. M. Putte Gowda	Cong. (I)
168.	Chitradurga	K. Mallanna	Cong. (I)
169.	Davangere	T. V. Chandrashekharappa	Cong. (I)
170.	Dharwar North	D. K. Naikar	Cong. (I)
171.	Dharwar South	F. H. Mohsin	Cong. (I)
172.	Gulbarga	C. M. Stephen	Cong. (I)

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

S. No	Constituency	Name of the Members	Party
173.	Hassan	H. N. Gowda	Cong. (I)
174.	Kanakpura	M. V. Chandrashekhara Murthy	Cong. (I)
175.	Kanara	G. Devaraya Naik	Cong. (I)
176.	Kolar (R)	G. Y. Krishnan	Cong. (I)
177.	Kappal	H. G. Ramulu	Cong. (I)
178.	Mandya	S. M. Krishna	Cong. (I)
179.	Mangalore	Janardhana Poojary	Cong. (I)
180.	Mysore	M. Rajeshekara Murtly	Cong. (I)
181.	Raichur	B. V. Desai	Cong. (I)
182.	Shimoga	S. T. Quadri	Cong. (I)
183.	Tumkur	K. Lakkappa	Cong. (I)
184.	Udupi	Oskar Fernandes	Cong. (I)
	Kerala (20)		
185.	Adoor (R)	P. K. Kodiyan	CPI
186.	Alleppey	Smt. Susheela Gopalam	CPI (M)
187.	Badagara	K. P. Unnikrishnan	Cong. (U)
188.	Calicut	E. K. Imbichi Bava	CPI (M)
189.	Cannanore	K. Kunhambu	Cong. (U)
190.	Chirayinkil	K. A. Rahim	Cong. (I)
191.	Ernakul m	Xavier Arakkal	Cong. (I)
192.	Idukki	M. M. Lawrence	CPI (M)
193.	Kasargod	M. Ramanna Rai	CPI (M)
194.	Kottayam	Skariah Thomas	UA
195.	Manjeri	Ebrahim Sulaiman Sait	ML
196.	Mavelikkara	P. J. Kurien	Cong. (U)
197.	Mukundapuram	E. Balanandan	CPI (M)
198.	Muvattapuzha	George Joseph Mundacakal	UA
199.	Ottapalam (R)	A. K. Balan	CPI (M)
200.	Palghat	V. S. Vijaya Raghavan	Cong. (I)
201.	Ponnani	G. M. Banatwalla	ML
202.	Quilon	B. K. Nair	Cong. (I)
203.	Trichur	K. A. Rajan	CPI
204.	Trivandrum	A. Neelachithadasan Nadar	Cong. (I)
	Madhya Pradesh (40)		
205.	Balaghat	Nand Kishore Sharma	Cong. (I)
206.	Bastar (R)	Laxman Karma	Cong. (I)
207.	Betul	Ghufran Azam	Cong. (I)
208.	Bhind	K. C. Sharma	Cong. (I)
209.	Bhopal	Dr Shankar Dayal Sharma	Cong. (I)
210.	Bilaspur(R)	Godil Prasad Anuragi	Cong. (I)
211.	Chhindwara	Kamal Nath	Cong. (I)
212.	Damoh	Prabhunarayan Tandon	Cong. (I)
213.	Dhar (R)	Fatehbhan Singh Chouhan	Cong. (I)
214.	Durg	Chandulal Chandrakar	Cong. (I)
215.	Guna	Madhavrao Scindia	Cong. (I)
216.	Gwalior	N. K. Shejwalkar	Janata
217.	Hoshangabad	Rameshwar Nikhra	Cong .(I)

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

S.No. Constituency	Name of the Members	Party
218. Indore	Prakash Chand Sethi	Cong. (I)
219. Jabalpur	Munder Sharma	Cong. (I)
220. Janjgir	R. G. Tiwari	Cong. (I)
221. Jhabua (R)	Dileep Singh Bhuria	Cong. (I)
222. Kanker (R)	Arvind Netam	Cong. (I)
223. Khajuraho	Smt. Vidyavati Chaturvedi	Cong. (I)
224. Khandwa	Thakur Shivekumar Singh	Cong. (I)
225. Khargone	Subhas Chandra Yadav	Cong. (I)
226. Mahasamund	Vidya Charan Shukla	Cong. (I)
227. Mandla (R)	Chhotelal Uike	Cong. (I)
228. Mandsaur	B. R. Nahata	Cong. ()
229. Morena (R)	Babu Lal Solanki	Cong. (I)
230. Raigarh (R)	Kumari Pushpa Devi Singh	Cong. (I)
231. Raipur	Keyur Bhusan	Cong. (I)
232. Rajgarh	Dr Vasant Kumar Pandit	Janata
233. Rajnandgaon	Slivendra Bahadur Singh	Cong. (I)
234. Rewa	Martand Singh	UA
235. Sagar (R)	Smt. Sahodrabai Rai	Cong. (I)
236. Sarangarh (R)	Parasram Bhardwaj	Cong. (I)
237. Satna	Gulsher Ahmad	Cong. (I)
238. Seoni	G. S. Mishra	Cong. (I)
239. Shahdol (R)	Dalbir Singh	Cong. (I)
240. Shajapur (R)	Phool Chand Varma	Janata
241. Sidhi (R)	Motilal Singh	Cong. (I)
242. Surguja (R)	Chakra Dhari Singh	Cong. (I)
243. Ujjain (R)	Satyanarayan Jatiya	Janata
244. Vidihsa	Pratap Bhanu Sharma	Cong. (I)
Maharashtra (48)		
245. Ahmednagar	Chandrabhan Athare Patil	Cong. (I)
246. Akola	Madhusudan Vairale	Cong. (I)
247. Amravati	Smt Usha Prakash Choudhari	Cong. (I)
248. Aurangabad	Qazi Saleem	Cong. (I)
249. Baramati	Shankarrao Patil	Cong. (I)
250. Bhandara	Keshaorao Pardhi	Cong. (I)
251. Bhir	Mrs. Kesharbai Kshirsagar	Cong. (I)
252. Bombay North	Ravindra Varma	Janata
253. Bombay North Central	Smt Pramila Dandavate	Janata
254. Bombay North East	Dr Subramaniam Swamy	Janata
255. Bombay North West	Ram Jethmalani	Janata
256. Bombay South	Ratansinha Rajda	Janata
257. Bombay South Central	R. R. Bhole	Cong. (I)
258. Buldhana (R)	Balkrishna Wasnik	Cong. (I)
259. Chandrapur	Shantaram	Cong. (I)
260. Chimur	Vilas Muttemwar	Cong. (I)
261. Dahanu (R)	D. B. Shingda	Cong. (I)
262. Dhule (R)	Bhoye Reshma Motiram	Cong. (I)
263. Erandel	Vijay N. Patil	Cong. (I)

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

S. No.	Constituency	Name of the Members	Party
264.	Hingoli	Uttam Rathod	Cong. (I)
265.	Ichalkaranji	R. S. Mane	Cong. (I)
266.	Jalgaon	Y. S. Mahajan	Cong. (I)
267.	Jalna	Balasaheb Pawar	Cong. (I)
268.	Karad	Yashwantrao Mohite	Cong. (I)
269.	Khed	Ram Krishna More	Cong. (I)
270.	Kolaba	A. T. Patil	Cong. (I)
271.	Kolhapur	Udaysingrao Gaikwad	Cong. (I)
272.	Kopargaon	Balasaheb Wikhe Patil	Cong. (I)
273.	Latur	Shivraj V. Patil	Cong. (I)
274.	Malegaon (R)	Z. M. Kahandole	Cong. (I)
275.	Nagpur	Jambuwant Bapurao Dhote	Cong. (I)
276.	Nanded	S. B. Chavan	Cong. (I)
277.	Nandurbar (R)	Naik Surup Singh Hirya	Cong. (I)
278.	Nasik	Dr. Pratap Wagh	Cong. (I)
279.	Osmanabad (R)	T. M. Sawant	Cong. (I)
280.	Pandharpur	Bhausaheb Thorat	Cong. (I)
281.	Parbhani	R. N. Yadav	Cong. (I)
282.	Pune	V. N. Gadgil	Cong. (I)
283.	Rajapur	Prof Madhu Dandavate	Janata
284.	Ramtek	J. C. Barve	Cong. (I)
285.	Ratnagiri	Bapusaheb Parulekar	Janata
286.	Sangli	Vasantrao Patil	Cong. (I)
287.	Satara	Yashvantrao Chavan	Cong. (U)
288.	Sholapur	Gangadhar S. Kuchan	Cong. (I)
289.	Thane	R. K. Mhalgi	Janata
290.	Wardha	Vasant Sathe	Cong. (I)
291.	Washim	Gulam Nabi Azad	Cong. (I)
292.	Yeotmal	Uttamrao Patil	Cong. (I)
	Manipur (2)		
293.	Inner Manipur	Neagom Mohendra	CPI
294.	Outer Manipur (R)	N. Gouzagin	Cong. (I)
	Meghalaya (2)		
295.	Shillong	Vacant	
296.	Tura	P. A. Sangma	Cong. (I)
	Nagaland (1)		
297.	Nagaland	Chingwang Konyak	Cong. (I)
	Orissa (21)		
298.	Aska	Ram Chandra Rath	Cong. (I)
299.	Balasore	Chintamani Jena	Cong. (I)
300.	Berhampur	Jagannath Rao	Cong. (I)
301.	Bhadrak (R)	Arjun Sethi	Cong. (I)
302.	Bhubaneswar	Chintamani Panigrahi	Cong. (I)
303.	Bolangir	Nitya Nanda	Cong. (I)
304.	Cuttak	Janki Ballav Patnaik	Cong. (I)
305.	Deogarh	Narayan Sahu	Cong. (I)
306.	Dhenkanal	K. P. Singh Deo	Cong. (I)
307.	Jagatsinghpur	Lakshman Mallick	Cong. (I)

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

S. No. Constituency	Name of the Members	Party
308. Jajpur (R)	A. C. Das	Cong. (I)
309. Kalahandi	Rasa Behari Behra	Cong. (I)
310. Kendrapara	Biju Patnaik	Janata (S)
311. Keonjhar (R)	Harihar Soren	Cong. (I)
312. Koraput (R)	Giridhar Gomango	Cong. (I)
313. Mayurbanj (R)	Manmohan Tudu	Cong. (I)
314. Nowrangpur (R)	K. Pradhani	Cong. (I)
315 Phulbani (R)	Mrutaunjaya Nayak	Cong. (I)
316 Puri	Brajimohan Mohanty	Cong. (I)
317. Sambalpur	Dr. Karupa Sindhu Bhoi	Cong. (I)
318. Sundergarh(R)	Christopher Ekka	Cong. (I)
Punjab (13)		
319. Amritsar	R. L. Bhatia	Cong.(I)
320. Bhatinda(R)	Hakam Singh	Cong.(I)
321. Faridkot	Smt . Gurbinder Kaur	Cong.(I)
322. Firozepur	Bal Ram Jakhar[1]	
323. Gurdaspur	Smt Sukhbuns Kaur	Cong.(I)
324. Hoshiarpur	Zail Singh	Cong.(I)
325. Jullundur	R. S. Sparrow	Cong(I)
326. Ludhiana	Devinder Singh Garcha	Cong (I)
327. Patiala	Amarender Singh	Cong. (I)
328. Phillaur (R)	Sunder Singh	Cong. (I)
329. Ropar (R)	Buta Singh	Cong. (I)
330. Sangrur	G. S. Nihal Singh Wala	Cong (I)
331. Taran Taran	L. S. Tur	UA
Rajasthan (25)		
332. Ajmer	Bhagwan Dev	Cong. (I)
333. Alwar	Ram Sigh Yadav	Cong. (I)
334. Banswara (R)	Bheekha Bhai	Cong. (I)
335. Barmer	Virdhi Chand Jain	Cong. (I)
336. Bayana	Jagannath Pahadia	Cong. (I)
337. Bharatpur	Rajesh Pilot	Cong. (I)
338. Bhilwara	Girdhari Lal Vyas	Cong (I)
339. Bikaner	Manphool Singh Chaudhary	Cong. (I)
340. Chittorgarh	Prof Nirmala Kumari Shakawat	Cong. (I)
341. Churu	Daulat Ram Saran	Janata (S)
342. Dausa	Nawal Kishore Sharma	Cong. (I)
343. Ganganagar (R)	Birbal	Cong. (I)
344. Jaipur	Satish Agarwal	Janata
345. Jalore	Virda Ram Phulwariya	Cong. (I)
346. Jhalawar	Chaturbhuj	Janata
347. Jhunjhunu	Bhim Singh	Janata
348. Jodhpur	Ashok Gehlot	Cong. (I)
349. Kota	Krishna Kumar Goyal	Janata
350. Nagaur	Nathu Ram Mirdha	Cong. (U)
351. Pali	Mool Chand Daga	
352. Salumber (R)	Jai Narayan Roat	Cong. (I)
353. Sawai Madhopur(R)	Ram Kumar Meena	Cong. (I)

1. Bal Ram Jakhar was elected on the congress (I) ticket but ceased to have any party affiliation after his election as Speaker of Lok Sabha.

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

S. No.	Constituency	Name of the Members	Party
354.	Sikar	Kumbha Ram Arya	Janata(S)
355.	Tonk (R)	Banwari Lal	Cong. (I)
356.	Udaipur	Mohanlal Sukhadia	Cong. (I)
	Sikkim (1)		
357.	Sikkim	P. M. Subha	UA
	Tamil Nadu (39)		
358.	Arkonam	A. M. Velu	Cong. (I)
359.	Chinglepattu	Era Anbarasu	Cong. (I)
360.	Chidambaram (R)	Dr. V. Kulandaivalu	DMK
361.	Coimbatore	Era Mohan	DMK
362.	Cuddalore	R. Muthu Kumaran	Cong. (I)
363.	Dharamapuri	K. Arjunan	DMK
364.	Dindigul	K. Maya Thevar	DMK
365.	Gobichettipalayam	C. Chinnaswamy	AIADMK
366.	Karur	S. A. Dorai Sebastian	Cong. (I)
367.	Krishnagiri	K. Ramamurthy	Cong. (I)
368.	Madras Central	Dr. A. Kalanidhi	DMK
369.	Madras. North	G. Lakshmanan	DMK
370.	Madra South	R. Venkataraman	Cong. (I)
371.	Madurai	A. G. Subburaman	Cong. (I)
372.	Mayuram	N. Kudanthai Ramalingam	Cong. (I)
373.	Nagapattinam (R)	Karunanithi Thazhai	DMK
374.	Nagarcoil	N. Dennis	Cong. (I)
375.	Nilgiris	R. Prabha	Cong. (I)
376.	Palani	A. Senapathi Gounder	Cong. (I)
377.	Perambalur (R)	K. B. S. Mani	Cong. (I)
378.	Periyakulam	Cumbum N. Natarajan	DMK
379.	Pollachi (R)	C. T. Dhandapani	DMK
380.	Pudukkottai	V. N. Swaminathan	Cong. (I)
381.	Ramanathapuram	M. S. K. Sathiyandran	DMK
382.	Rasipuram (R)	B. Deverajan	Cong. (I)
383.	Salem	C. Palaniappan	DMK
384.	Sivaganga	R. V. Swaminathan	Cong. (I)
385.	Sivakasi	N. Soundararajan	AIADMK
386.	Sriperambudur(R)	T. Nagaratham	DMK
387.	Tenkasi (R)	M. Arunachalam	Cong. (I)
388.	Thanjavur	S. Singaravadival	Cong. (I)
389.	Tindivanam	S. S. Ramaswamy	Cong. (I)
390.	Tiruchendur	K. T. Kosalram	Cong. (I)
391.	Tiruchengode	M. K. Kandaswamy	DMK
392.	Tiruchirapalli	N. Selvaraju	DMK
393.	Tirunelveli	D. S. A. Sivaprakasam	DMK
394.	Tiruppattur	S. Murugain	DMK
395.	Vandavasi	D. Pattuswamy	Cong. (I)
396.	Vellore	Abdul Samad	ML
	Tripura (2)		
397.	Tripura East (R)	Baju Ban Riyan	CPI(M)
398.	Tripura West	Ajoy Biswas	CPI (M)

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

S. No.	Constituency	Name of the Members	Party
	Uttar Pradesh (85)		
399.	Agra	Nihal Singh	Cong. (I)
400.	Akabarpur (R)	Ram Awadh	Janata (S)
401.	Aligarh	Smt. Indra Kumari	Janata (S)
402.	Allahabad	Vishwa Nath Pratap Singh	Cong. (I)
403.	Almora	Harish Rawat	Cong. (I)
404.	Amethi	Sanjay Gandhi	Cong. (I)
405.	Amroha	Chandra Pal Singh	Janata(S)
406.	Aonla	Jaipal Singh Kashyap	Janata (S)
407.	Azamgarh	Chandrajeet Yadav	Janata (S)
408.	Badaun	Mohd. Asrar Ahmad	Cong. (I)
409.	Baghpat	Charan Singh	Janata (S)
410.	Bahraich	Maulana Saiyad Muzaffer Hussain	Cong (I)
411.	Ballia	Chandra Shekhar	Janata
412.	Balrampur	Chandra Bhal Mani Tewari	Cong. (I
413.	Banda	Ram Nath Dubey	Cong. (I)
414.	Bansgaon(R)	Mahabir Prasad	Cong. (I)
415.	Bara Banki (R)	Ram Kinkar	Janata (S)
416.	Bareilly	Misryar Khan	Janata (S)
417.	Basti (R)	Kalpnath Sonkar	Cong. (I)
418.	Bijnor (R)	Mangal Ram Premi	Janata (S)
419.	Bilhaur	R. N. Tripathi	Cong. (I)
420.	Bulandshahr	Mahmood Hassan Khan	Janata (S)
421.	Chail(R)	R. N. Rakesh	Cong. (I)
422.	Chandauli	Nihal Singh	Janata
423.	Deoria	Ramayan Rai	Cong. (I)
424.	Domariaganj	Jalil Abbasi	Cong. (I)
425.	Etah	Malik M. M. A. Khan	Cong. (I)
426.	Etawah	Ram Singh Shakya	Janata (S)
427.	Faizabad	Jai Ram Verma	Cong. (I)
428.	Farrukhabad	Daya Ram Shakya	Janata
429.	Fatehpur	Hari Krishan Shastri	Cong. (I)
430.	Firozabad (R)	Rajesh Kumar Singh	Janata (S)
431.	Garhwal	H. N. Bahuguna	Cong. (I)
432.	Ghatampur (R)	Ash Karan Sankhwar	Janata (S)
433.	Ghazipur	Zainul Basher	Cong. (I)
434.	Ghosi	Jharkhande Rai	CPI
435.	Gonda	Anand Singh Alias Annubhaiya	Cong. (I)
436.	Gorakhpur	Harikesh Bahadur	Cong. (I)
437.	Hamirpur	Doongar Singh	Cong. (I)
438.	Hapur	Anwar Ahmad	Janata (S)
439.	Hardoi (R)	Manni Lal	Cong . (I)
440.	Hardwar (R)	Jagpal Singh	Janata (S)
441.	Hathras (R)	Chandrapal Shailani	Janata (S)
442.	Jalaun (R)	Nathuram Shakyawar	Cong. (I)
443.	Jalesar	Chaudhari Multan Singh	Janata (S)
444.	Jaunpur	Dr A. U. Azmi	Janata(S)
445.	Jhansi	Vishwa Nath Sharma	Cong. (I)
446.	Kairana	Smt Gayatri Devi	Janata (S)
447.	Kaiserganj	Ranbir Singh	Cong. (I)
448.	Kannauj	Chhotey Singh Yadav	Janata (S)

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

S. No.	Constituency	Name of the Members	Party
449.	Kanpur	Arif Mohammad Khan	Cong. (I)
450.	Khalilabad	Krishna Chandra Pandey	Cong .(I)
451.	Kheri	Smt. Usha Verma	Cong. (I)
452.	Khurja (R)	Trilok Chand	Janata (S)
453.	Lalganj (R)	Chhangur Ram	Janata (S)
454.	Lucknow.	Smt. Sheila Kaul	Cong. (I)
455.	Machhlishahr	Sheo Sharan Verma	Janata (S)
456.	Maharajganj	Ashfaq Hussain	Cog. (I)
457.	Mainpuri	Raghunath Singh Verma	Janata (S)
458.	Mathura	Digambar Singh	Janta (S)
459.	Meerut	Smt Mohsina Kidwai	Cong. (I)
460.	Mirzapur.	Aziz Imam	Cong. (I)
461.	Misrikh (R)	Ram Lal Rahi	Cong. (I)
462.	Mohan Lal Ganj (R)	Smt Kailash Pati	Cong. (I)
463.	Moradabad	Gulam Mohammad Khan	Janata (S)
464.	Muzaffarnagar	Ghayoor Ali Khan	Janata (S)
465.	Nanital	Narayan Datt Tewari	Cong. (I)
466.	Padrauna	C. P. N. Singh	Cong. (I)
467.	Phulpur	B. D. Singh	Janata(S)
468.	Pilibhit	Harish Kumar Gangwar	Cong. (I)
469.	Pratapgarh	Ajit Pratap Singh	Cong. (I)
470.	Rae Bareli	Arun Kumar Nehru	Cong. (I)
471.	Rampur	Zulfiquar Ali Khan	Cong. (I)
472.	Roberts Ganj (R)	Ram Pyare Panika	Cong. (I)
473.	Saharanpur	Rasheed Massod	Janata (S)
474.	Saidpur(R)	Rajnath Sonkar Shastri	Janata (S)
475.	Salempur	Ram Nagina Mishra	Cong. (I)
476.	Sambhal	Bijendra Pal Singh	Cong. (I)
477.	Shahabad	D. G. Singh	Cong. (I)
478.	Shahjahanpur	Jitendra Prasad	Cong. (I)
479.	Sitapur	Dr. Rajendra Kumari Bajpai	Cong. (I)
480.	Sultanpur	Gire Raj Singh	Cong. (I)
481.	Tehri Garhwal	T. S. Negi	Cong. (I)
482.	Unnao	Z. R. Ansari	Cong. (I)
483	Varanasi	Pt. Kamalapati Tripathi	Cong. (I)
	West Bengal (42)		
484.	Allipurduars	Pius Tirkey	RSP
485.	Arambagh	Bijoy Modak	CPI (M)
486.	Asansol	Ananda Gopal Mukherjee	Cong. (I)
487.	Balurghat(R)	Palas Barman	RSP
488.	Bankura	Acharia Basadeb	CPI (M)
489.	Barasat	Chitta Bosu	FB
490.	Barrackpore	Mohammed Ismail	CPI(M)
491.	Basirhat	Inderjit Gupta	CPI
492.	Berhampore	Tridib Chaudhuri	RSP
493.	Birbhum (R)	Gadadhar Saha	CPI(M)
494.	Bolpur	Dr Saradish Roy	CPI(M)
495.	Burdwan	Sushil Bhattacharya	CPI(M)
496.	Calcutta North East	Sunil Maitra	CPI(M)
497.	Calcutta North West	Asoke Sen	Cong. (I)

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

S No.	Constituency	Name of the Members	Party
498.	Calcutta South	Satyasadhan Chakraborty	CPI(M)
499.	Contai	Sudhir Kumar Giri	CPI(M)
500.	Cooch Behar (R)	Amar Roy Pradhan	FB
501.	Darjeeling	Ananda Pathak	CPI(M)
502.	Diamond Harbour	Jyotirmoy Bosu	CPI(M)
503.	Dum Dum	Niren Ghosh	CPI(M)
504.	Durgapur(R)	Krishna Chandra Halder	CPI(M)
505.	Hooghly	Rup Chand Pal	CPI(M)
506.	Howrah	Samar Mukherjee	CPI(M)
507.	Jadavpur	Somnath Chatterjee	CPI(M)
508.	Jalpaiguri	Subodh Sen	CPI (M)
509.	Jangipur	Zainal Abedin	CPI(M)
510.	Jhargram(R)	Matilal Hasda	CPI(M)
511.	Joynagar(R)	Sanat Kumar Mandal	RSP
512.	Katwa	Saifuddin Chowdhary	CPI(M)
513.	Krishnagar	R. P. Das	CPI(M)
514.	Malda	Abul Barkat Ataul Ghani Choudhury	Cong. (I)
515.	Mathurapur(R)	Mukunda Mandal	CPI(M)
516.	Midnapore	Narayan Choubey	CPI
517.	Murshidabad	Masudal Hossain Syed	CPI (M)
518.	Nabadwip (R)	Smt Bibha Ghosh (Goswami)	CPI(M)
519.	Panskura	Smt Geeta Mukherjee	CPI
520.	Purulia	Chitta Mahata	FB
521.	Raiganj	Dr Golam Yazdani	Cong. (I)
522.	Serampore	Dinendra Bhattacharya	CPI(M)
523.	Tamluk	Satyagopal Mishra	CPI(M)
524.	Uluberia	Hannan Mollah ..	CPI(M)
525.	Vishnupur (R)	A. K. Saha	CPI(M)
	Union Territories		
	Andaman and Nicobar Islands(1)		
526.	Andaman and Nicobar Islands	Manoranjan Bhakta	Cong. (I)
	Arunachal Pradesh (2)		
527.	Arunachal East	Sobeng Tayeng	Cong. (I)
528.	Arunachal West	P. K. Thungon	Cong. (I)
	Chandigarh (1)		
529.	Chandigarh	Jagan Nath Kaushal	Cong. (I)
	Dadra and Nagar Haveli (1)		
530.	Dadra and Nagar Haveli	R. P. Mahala	Cong. (I)
	Delhi (7)		
531.	East Delhi	H. K. L. Bhagat	Cong. (I)
532.	Chandni Chowk	Bhiku Ram Jain	Cong. (I)
533.	Delhi Sadar	Jagdish Tytler	Cong. (I)
534.	Karol Bagh (R)	Dharam Das Shastri	Cong. (I)

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

S No.	Constituency	Name of the Members	Party
535.	New Delhi	Atal Behari Vajpayee	Janata
536.	Outer Delhi	Sajjan Kumar	Cong. (I)
537.	South Delhi	Charan Jit Singh	Cong. (I)
	Goa, Daman and Diu (2)		
538.	Mormugao	Eduardo Faleiro	Cong. (I)
539.	Panaji	Smt. Sanyogita Rane	UA
	Lakshadweep (1)		
540.	Lakshadweep	P. M. Sayeed	Cong. (U)
	Mizoram (1)		
541.	Mizoram	Dr. R. Rothuama	UA
	Pondicherry (1)		
542.	Pondicherry	P. Shanmugam	Cong. (I)
	Anglo-Indians (2)[1]		
543.	—	Frank Anthony	UA
544.	—	A. E. T. Barrow	UA

. **Civilian Awards 1979**

Bharat Ratna — The award is made for exceptional work for the advancement of art, literature and science and in recognition of public service of the highest order.

Recipient — Mother Mary Teresa Bojaxhiu

Padma Vibhushan — The award is made for exceptional and distinguished service in any field, including service rendered by government servants.

Recipients
1. Rai Krishnadass, eminent scholar and author.
2. Bismillah Khan, eminent classical muscian (Hindustani).

Padma Bhushan — The award is made for distinguished service of high order in any field including service rendered by government servants.

Recipient — Sunil M. Gavaskar, distinguished cricketer

4. GALLANTRY AWARDS 1979[2]

Param Vir Chakra — The highest decoration for valour, the Param Vir Chakra, is awarded for the most conspicuous bravery of some daring or pre-eminent act of valour of self-sacrifice in the presence of the enemy, whether on land, at sea or in the air.

Recipient — None

Maha Vir Chakra — The Maha Vir Chakra, the second highest decoration is awarded for acts of conspicuous gallantry in the presence of enemy, whether on land, at sea or in the air.

Recipients — None

Vir Chakra — The Vir Chakra is third in the order or awards given for acts of gallantry in the presence of the enemy whether on land, at sea or in the air.

[1]Nominated by the President.
[2]As on 31 December 1979

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

Recipient	None
Ashok Chakra	This medal is granted for the most conspicuous bravery or some daring or pre-eminent act of valour or self-sacrifice on land, at sea or in the air.
Recipient	None
Kirti Chakra	This decoration is awarded for conspicuous gallantry.
Recipient	7
Saurya Chakra	This decoration is awarded for an act of gallantry.
Recipients	28
Sena Medal	32
Nao Sena Medal	14
Vayu Sena Medal	9

5 DISTINGUISHED SERVICE AWARDS 1979[1]

Param Vishisht Seva Medal	The Param Vishishit Seva Medals awarded to personnel of all the three services in recognition of distinguished service of the 'most exceptional' order.
Recipients	14
Ati Vishisht Seva Medal	The Ati Vishisht Seva Medal is awarded to personnel of all the three services in recognition of distinguished service of 'exceptional' order.
Recipients	38
Vishisht Seva Medal	The Vishisht Seva Medal is awarded to personnel of all the three services in recognition of distinguished service.
Recipients	44

[1]As on 31December 1979.

6. UNIVERSITIES IN INDIA[1]

(As on 30 September 1978)

S. No.	Name, location and year of establishment	Type as specified in Act	Number of colleges as on 31 March 1979	Number of students	
				University deptt./ university colleges	Affiliated colleges
1	2	3	4	5	6
1.	Agra University, Agra (1926)	Affiliating	42	514	44,333
2.	Aligarh Muslim University, Aligarh 1920	Residential	4	11,045	—
3.	Allahabad University, Allahabad (1887)	Residential and Teaching	12	13,466	14,643
4.	Andhra University, Waltair (1925)	Teaching and Affiliating	117	6,996	43,940
5.	Andhra Pradesh Agricultural University, Hyderabad, (1963)	Residential with 3 campuses	6	2,371	—
6.	Annamalai University, Annamalainagar (1928)	Unitary and Residential	—	7,552	—
7.	Assam Agricultural University, Jorhat (1968)	Residential	3	863	—
8.	Avadh University, Faizabad (1975)	Affiliating	24	—	20,613
9.	Awadesh Pratap Singh University, Rewa (1968)	Affiliating	44	41	18,673
10.	Banaras Hindu University, Varanasi (1915)	Teaching and Residential	5	16,824	3,078
11.	Bangalore University, Bangalore (1964)	Affiliating	93	4,387	49,622
12.	Berhampur University, Berhampur (1966)	Affiliating	20	669	6,022
13.	Bhagalpur University, Bhagalpur (1960)	Affiliating-*cum*-Teaching	36	8,392	3,940
14.	Bhavnagar, University, Bhavnagar[2]	Residential and Teaching	—	—	—
15.	Bhopal University, Bhopal (1970)	Teaching and Affiliating	26	132	19,404
16.	Bidhan Chandra, Krishi Visvavidyalaya, Kalyani, (1974)	Residential	—	1,074	—
17.	Bihar University, Muzaffarpur (1952)	Teaching and Affiliating	57	12,038	8,028
18.	Bombay University, Bombay (1857)	Teaching, Affiliating and Federal	120	5,207	1,20,224
19.	Bundelkhand University, Jhansi (1975)	Affiliating	15	—	11,249
20.	Burdwan University, Burdwan (1959)	Affiliating and Teaching	58	1,357	36,285
21.	Calcutta University, Calcutta (1857)	Teaching and Affiliating	219	13,753	1,55,600
22.	Calicut University, Calicut (1968)	Teaching, Affiliating and Residential	65	648	32,002
23.	Cochin University, Cochin (1971)	Federal	1	737	904
24.	Chandrasekhar Azad University of Agriculture and Technology, Kanpur (1974)	Residential	2	1,178	—
25.	Delhi University, Delhi (1922)	Teaching and Affiliating	57	20,986	57,342

[1]Appendix to Chapter 5. [2]Not yet started functioning.

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

1	2	3	4	5	6
26.	Dibrugarh University, Dibrugarh (1965)	Teaching, Affiliating and Residential	51	772	14,460
27.	Garhwal University, Srinagar (Garhwal) (1973)	Residential-*cum*-Affiliating	15	2,151	9,830
28.	Gauhati University, Gauhati (1947)	Teaching, Affiliating and Residential	103	2,477	34,785
29.	G.B. Pant University of Agricultre and Technology, Pantnagar (1958)	Residential	6	2,395	—
30.	Gorakhpur University, Gorakhpur (1956)	Teaching and Affiliating	92	7,196	62,087
31.	Gujarat University, Ahmedabad (1949)	Teaching and Affiliating	148	2,061	84,725
32.	Gujarat Agriculture University, Banaskantha (1972)	Residential	5	1,664	—
33.	Gujarat Ayurveda University, Jamnagar (1965)	Teaching and Affiliaitng	11	629	1,415
34.	Guru Nanak Dev University, Amritsar (1969)	Affiliating and Teaching	75	1,592	35,306
35.	Haryana Agricultural University, Hissar (1970)	Residential	7	1,811	—
36.	Himachal Pradesh Univesity, Simla (1970)	Affiliating	24	1,472	9,248
37.	Himachal Pradesh Krishi Visvavidyalaya Palampur (1978)	Residential and Teaching	2	576	—
38.	Hyderabad University, Hyderabad (1974)	Teaching and Residential	—	211	—
39.	Indira Kala Sangit Visvavidyalaya, Khairgarh (1956)	Teaching and Affiliating	24	122	1,953
40.	Indore University, Indore (1963)	Federal	19	576	19,758
41.	Jabalpur University, Jabalpur (1956)	Statutory Body	27	1,050	18,609
42.	Jadavpur University, Calcutta (1955)	Unitary, Teaching with powers of Affiliation.	2	4,439	542
43.	Jammu University, Jammu (1969)	Teaching and Affiliating	15	1,586	5,232
44.	Jawaharlal Nehru University, New Delhi (1966)	Residential and Unitary	—	3,201	—
45.	Jawaharlal Nehru Krishi Visvavidyalaya Jabalpur (1964)	Residential	9	2,343	—
46.	Jawaharlal Nehru Technological University, Hyderabad (1972)	Unitary	4	3,316	—
47.	Jiwaji University, Gwalior (1963)	Teaching and Affiliating	38	228	25,808
48.	Jodhpur University, Jodhpur (1962)	Residential	3	11,752	1,288
49.	Kalyani University, Kalyani (1960)	Affiliating	3	1,443	817
50.	Kakaliya University, Warangal (1976)	Affiliating	16	1,964	4,271
51.	K.S. Darbhanga Sanskrit University Darbhanga, (1960)	Teaching and Affiliating	49	833	2,594
52.	Kanpur University, Kanpur (1965)	Affiliating	72	—	56,065
53.	Karnatak University, Dharwar (1950)	Affiliating and Residential	136	6,885	47,714
54.	Kashi Vidyapith, Varanasi (1974)	Charted Prov. Univ. from 15-1-74	—	4,567	—
55.	Kashmir University, Srinagar (1948)	Teaching and Affiliating	24	1,484	10,455

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

56. Kerala University, Trivandrum (1937)	Teaching and Affiliating	99	982	63,617
57. Kerala Agricultural University, Trichur (1971)	Residential	3	1,085	—
58. Konkan Krishi Vidyapith, Dapoli (1972)	Teaching, Research and Extension	2	577	—
59. Kumaon University, Nainital (1973)	Affiliating	11	3,450	3,747
60. Kurukshetra University, Kurukshetra (1956)	Teaching-*cum*-Affiliating	61	4,279	26,500
61. Lucknow University, Lucknow (1921)	Teaching and Residential	22	15,662	17,013
62. Madras University, Madras (1857)	Teaching and Affiliating	163	2,785	1,07,059
63. Madurai Kamaraj University, Madurai (1965)	Teaching and Affiliating	99	829	45,782
64. Mogadh University, Bodhgaya (1962)	Affiliating-*cum*-Residential	55	20,015	8,407
65. M.S. University of Baroda, Vadodra (1949)	Teaching and Residential	1	19,331	—
66. Maharishi Dayanand University, Rohtak (1976)	Affiliating	64	1,674	26,216
67. Mahatma Phule Krishi Visvavidyalaya, Rahuri (1967)	Federal	5	1,701	—
68. Marathwada University, Aurangabad (1958)	Affiliating	83	1,767	31,321
69. Marathwada Krishi Viswavidyalaya, Parbhani (1972)	Affiliating	4	1,325	—
70. Meerut University, Meerut (1965)	Affiliating	53	288	61,900
71. Mithila University, Darbhanga (1972)	Teaching and Affiliating	52	13,071	3,730
72. Mysore University, Mysore (1916)	Affiliating	124	5,666	56,193
73. Nagarjuna University, Nagarjunnagar (1976)	Teaching with power of Affiliating	30	913	15,300
74. Nagpur University, Nagpur (1923)	Teaching and Affiliating	140	5,061	41,080
75. N.D. University of Agricultural and Technology, Faizabad (1974)	Residential	1	24	—
76. North Bengal University, Rajaram Mohanpur, Darjeeling (1962)	Teaching and Affiliating	34	2,315	14,758
77. North Eastern Hill University, Shillong (1973)	Teaching and Affiliating	24	584	6,060
78. Orissa University of Agricultural and Technology, Bhubaneswar (1961)	Residential	4	913	—
79. Osmania University, Hyderabad (1918)	Affiliating and Residential	108	9,526	27,597
80. Panjab University, Chandigarh (1947)	Affiliating and Teaching	86	6,415	44,311
81. Patna University, Patna (1917)	Teaching-cum-Residential	13	9,490	961
82. Perarignar Anna University of Technology, Madras (1978)	Residential	4	3,578	—
83. Poona University, Poona (1948)	Teaching and Affiliating	116	2,981	67,149
84. Punjab Agricultural University, Ludhiana (1961)	Residential	6	2,719	—
85. Punjabi University, Patiala (1961)	Teaching and Affiliating	48	1,956	20,475
86. Punjabrao Krishi Vidyapith, Akola (1969)	Yet to be finalized	5	1,999	—
87. Rabindra Bharati University, Calcutta (1962)	Teaching and Affiliating	—	2,649	—
88. Rajasthan University, Jaipur (1946)	Teaching-*cum*-Affiliating	170	14,364	98,698
89. Rajendra Agricultural University, Pusa (Samastipur), 1970	Residential and Teaching	5	1,345	—
90. Ranchi University, Ranchi (1960)	Affiliating	62	14,708	17,742

INDIA 1980
CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

1	2	3	4	5	6
91.	Ravi Shankar University, Raipur (1963)	Teaching, Affiliating and Residential	62	759	35,031
92.	Rohilkand University, Barielly (1975)	Affiliating	31	—	29,037
93.	Roorkee University, Roorkee (1948)	Unitary	—	2,231	—
94.	Sambalpur University, Sambalpur (1966)	Affiliating-*cum*-teaching	30	2,266	9,055
95.	Sampurnanand Sanskrit University, Varanasi (1958)	Residential, Affiliating and Examining	119	860	1,941
96.	Sardar Patel Univesity, Vallabh Vidyanagar (1955)	Teaching and Affiliating	14	1,520	7,927
97.	Saugar University, Sagar (1946)	Teaching, Affiliating and Residential	50	7,494	22,013
98.	Saurashtra University, Rajkot (1965)	Affiliating	61	3,072	30,547
99.	Shivaji University, Kolhapur (1962)	Affiliating and Teaching	88	3,025	46,649
100.	S.N.D.T. Women's University, Bombay (1949)	Teaching and Affiliating	24	9,192	4,661
101.	South Gujarat University, Surat (1966)	Affiliating	35	612	20,843
102.	Sri Venkateswara University, Tirupati (1954)	Residential, Teaching and Affiliating	45	3,438	23,400
103.	Tamil Nadu Agricultural University, Coimbatore (1971)	Residential	5	2,508	—
104.	Udaipur University, Udaipur (1962)	Teaching and Affiliating	14	5,322	3,798
105.	University of Agricultural Sciences, Bangalore (1963)	Teaching, Affiliating and Residential	8	3,460	—
106.	Utkal University, Bhubaneswar (1943)	Affiliating and Teaching	61	4,423	23,569
107.	Vikram University, Ujjain (1957)	Teaching and Affiliating	43	3,907	21,237
108.	Visva Bharati University, Santiniketan (1951)	Unitary and Teaching	7	1,417	—
	Institutions Deemed to be Universities				
1.	Birla Institute of Technology and Science, Pilani (1964)	Unitary and Residential	—	2,210	—
2.	Central Institute of English and Foreign Languages, Hyderabad (1973)	Residential	—	352	—
3.	Gandhigram Rural Institute, Gandhigram, Madurai DT (1976)	Not indicated	—	437	—
4.	Gujarat Vidyapith, Ahmedabad (1963)	Residential	—	423	—
5.	Gurukul Kangri, Hardwar (1962)	Teaching and Residential	—	181	—
6.	Indian Agricultural Research Institute, New Delhi (1958)	Unitary and Residential	—	571	—
7.	Indian Institute of Science, Bangalore (1958)	Residential and Teaching	—	1,071	—
8.	Indian School of Mines, Dhanbad (1967)	Residential	—	608	—
9.	Jamia Millia Islamia, New Delhi (1962)	Residential and Teaching	—	1,444	—
10.	Tata Institute of Social Sciences, Bombay (1964)	Residential and Teaching	—	184	—

Notes : (i) *Information furnished above relates to the academic session* 1978-79
(ii) *Enrolment figure in respect of Ravindra Bharati relates, to 'Main campus' only,*
(iii) *In the case of Institution Deemed to be Universities under Sec.* 3 *of the UGC Act* 1956
(iv) *Enrolment figures exclude-Pre-University Course/Intermediate/Preparatory classes.*
(v) *'No. of colleges'—excludes junior colleges and colleges offering only diploma courses.*

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

7. LALIT KALA AKADEMI AWARDS 1978[1]

No National Exhibition of Art was held during 1978

8. SANGEET NATAK AKADEMI FELLOWSHIPS AND AWARDS—1979[1]

Fellowships

1. P.L. Deshpande
2. D.T. Joshi
3. T.P. Kuppia Pillai
4. Sumati Mutatkar

Awardees

1. Saratchandra Arolkar	Hindustani Vocal
2. Samta Prasad	Hindustani Instrumental
3. R.K. Srikanthan	Karnatak Vocal
4. K. Venkataraju	Karnatak Instrumental
5. Kalidaman Singh	Nata Sankirtana of Manipur.
6. Kanika Banerjee	Rabindra Sangeet
7. P. Subbaraya Pillai	Bharata Natyam
8. Rohini Bhate	Kathak
9. Prabhat Ganguli	Creative Dance
10. Ammannur Madhava Chakiar	Koodyattam
11. G. Sankara Pillai	Playwriting
12. B.M. Shah	Direction
13. Amrish Puri	Acting
14. Koga Kamath	Puppetry

9. SAHITYA AKADEMI AWARDS 1979[1]

Language	Book (Subject)	Author
Assamese	*Sonali Jahaj* (Poetry)	Bhaben Baruah
Bengali	*Aranyer Adhikar* (Novel)	Mahasweta Devi
Dogri	*Nanga Rukh* (Novel)	O.P. Sharma 'Sarthi'
English	*Inside the Haveli* (Novel)	(Late) Rama Mehta
Gujarati	*Vamal Na Van* (Poetry)	(Late) Jagdish Joshi
Hindi	*Kal Sunana Mujhe* (poetry)	(Late) Dhoomil
Kannada	*Chitragalu Patragalu* (Lit. Portraits)	A.N. Moorthy Rao
Kashmiri	*Partavistan* (Poetry)	Marghoob Banihali
Konkani	*Dorya.Gozota* (Poetry)	R.V. Pandit
Maithili	*Krishna-Charit* (Poetry)	Tantranath Jha
Malayalam	*Vallatholinto Kavyasilpam* (Lit. Criticism)	N.V. Krishna Warrior
Manipuri	*Boro Saheb Ongbi Sanatombi* (Novel)	M.K. Binodini Devi
Marathi	*Srishti, Saundraya Ani Sanityamulya* (lit. Criticism)	Saratchandra Muktibodh
Nepali	*Maulo* (Essays)	Guman Singh Chamling
Oriya	*Mo Kahani* (Autobiography)	Kunjabihari Das
Punjabi	*Karuna Di Chho Ton Magron* (Poetry)	Jaswant Singh Neki
Rajasthani	*Paggi* (Poetry)	Chandra Prakash Dewal
Sanskrit	*Keralodayah* (Poetry)	K.N. Ezhuthachan
Sindhi	*Pal Pal Jo Parlao* (Poetry)	Hari Dilgir
Tamil	*Sakthi-Vaithiyam* (Short-stories)	T. Janakiraman
Telugu	*Janapriya Ramayanam* (Poetry)	P. Narayanacharya
Urdu	*Nawa-Awara* (Poetry)	Ghulam Rabbani Taban

1. Appendix to chapter 6.

10. NATIONAL AWARDS FOR FILMS 1978[1]

Category	Award	Film	Language	Awardee
Best feature film with mass appeal wholesome entertainment and aesthetic value	Swaran Kamal Rs 40,000	Ganadevata	Bengali	Department of Information and Cultural Affairs, Government of West Bengal (Producer). Also Rajat Kamal to Tarun Majumdar (Director).
Best feature film on National Integration	Rajat Kamal and Rs 30,000	Grahana	Kannada	M/s Harsha Pictures (Producer). Also Rajat Kamal and Rs. 10,000 to T.S. Nagabharana (Director).
Best feature film in Hindi	Rajat Kamal and Rs 5,000	Kasturi (jointly with Junoon)	Hindi	Bimal Dutt (Producer-Director) Also Rajat Kamal and Rs. 2,500.
Best feature film in Hindi	Rajat Kamal and Rs 5,000	Junoon (jointly with Kasturi).	Hindi	Shashi Kapoor (Producer) Also Rajat Kamal and Rs 2,500 to Shyam Benegal (Director).
Best direction	Rajat Kamal and Rs 20,000	Thamp	Malayalam	G. Aravindan (Director).
Best screen-play	Rajan Kamal and Rs 5,000	Grahana	Kannada	T.S. Ranga and T.S. Nagabharana (screen-play writers)
Best actor	Rajat Kamal and Rs 10,000	Parashuram	Bengali	Arun Mukherjee (A
Best actress	Rajat Kamal and Rs 10,000	Nimajjanam	Telugu	Smt. Sarda (Actress)
Best child actor	Rajat Kamal and Rs 5,000	Ganadevata	Bengali	Master Kanchan De Biswas (Child actor)
Best cinematography (colour)	Rajat Kamal and Rs 5,000	Junoon	Hindi	Govind Nihalani (Cameraman)
Best cinematography (Black and white)	Rajat Kamal and Rs 5,000	Thamp	Malayalam	Shaji (Cameraman)
Best sound recording	Rajat Kamal and Rs 5,000	Junoon	Hindi	Hitendra Ghosh (Sound-recording.
Best editing	Rajat Kamal and Rs 5,000	Parashuram	Bengali	Gangadhar Naskar (Editor)
Best music director	Rajat Kamal and Rs 10,000	Gaman	Hindi	Jaidev (Music-Director)
Best male playback singer	Rajat Kamal and Rs 10,000	Kaadu Kudu	Kannada	Shimoga Subbanna (Singer).

INDIA 1980
CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

Best female playback singer	Rajat Kamal and Rs 10,000	Gaman	Hindi	Smt. Chhaya Ganguli (singer)
Best children's film	Swaran Kamal and Rs 15,000	Joi Baba Felunath	Bengali	R.D. Bansal (Producer). Also Rajat Kamal and Rs 10,000 to Satyajit Ray (Director).
Award for the best feature film in regional languages.	Rajat Kamal and Rs 10,000.	Ondamondu Kaladalli	Kannada.	M/s L.N. Combines (Producer). Also Rajat Kamal and Rs 5,000 to Girish Karnad (Director).
—Do.—	—Do.—	Thamp.	Malayalam	K. Ravindranathan Nair (Producer) and Rajat Kamal to G. Aravindan (Director)
—Do.—	—Do.—	Nimajjanam	Telugu	M/s Red Rose art films (Producer). Also Rajat Kamal and Rs 5,000 to B.S. Narayana (Director).
Best information film (Documentary)	Rajat Kamal and Rs 5,000	Rumtek-A monastery wreathed in a hundred thousad rainbows.	English	Ramesh Sharma (Producer Director). Also Rajat Kamal and Rs 4,000.
Best educational/instructional film	Rajat Kamal and Rs 5,000	The Magic Hands.	English.	M/s Little cinema (Producer) Also Rajat Kamal and Rs 4,000 to Santi P. Chowdhury (Director)
Best promotional film	Rajat Kamal	It is Indian It is good	English	Films Division (Producer). Rajat Kamal to B. D. Garga (Director).
Best Newsreel cameraman	Rajat Kamal and Rs 5,000	Dawn over Gurais	Indian News Renew No.1558	Shri B.D. Garga (Director) C.L. Kaul (Cameraman)
Best Indian news Review	Rajat Kamal and Rs 5,000	Uttar Pradesh Samachar 54.	Hindi	Director of Information and Public Relations, U.P. (Producer).
Dada Saheb Phalke Award	Swaran Kamal and Rs 40,000 and a shawl			R.C. Boral.

Swaran Kamal—Golden Lotus
Rajat Kamal—Silver Lotus
[1]Appendix to Chapter 10

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

II. NATIONAL AWARDS FOR FILMS 1979[1]

Category	Award	Film	Language	Awardee
Best feature film	Swaran Kamal and Rs 40,000	Shodh	Hindi	Sitakant Misra (Producer). Also Rs 20,000 and Swaran Kamal to Biplab Roy Chaudhuri (Director).
Best feature film with mass appeal wholesome entertainment and aesthetic value	Swaran Kamal	Sankarabharanam	Telugu	Edida Nageswara Rao and Akasam Sriramulu (Producer) and Rajat Kam to K. Viswanath (Director)
Best feature film on national integration	Rajat Kamal and Rs 30,000	22 June 1897	Marathi	Nachiket Patwadhan (Producer). Also Rs 10,000 and Rajat Kamal to Nachiket and Jayoo Patwardhan (Director).
Best children's film	Swaran Kamal and Rs 15,000	Dangeyedda Makkalu	Kannada	T.S. Narasimhan and B.S. Somasundara (Producers). Also Rs. 10,000 and Rajat Kamal to U.S. Vadiraj (Director)
Best direction	Rajat Kamal and Rs 20,000	Ekdin Pratidin	Bengali	Mrinal Sen (Director)
Best screenplay	Rajat Kamal and Rs 10,000	Sparsh	Hindi	Sai Paranjpye (Screenplay writer).
Best cinematography (Colour)	Rajat Kamal and Rs 5,000	Shodh	Hindi	Rajan Kinagi (Cameraman)
Best cinematography (Black and white)	Rajat Kama and Rs 5,000	Neem Annapoorna	Bengali	Kamal Nayak (Cameraman)
Best editing	Rajat Kamal and Rs 5,000	Ekdin Pratidin	Bengali	Gangadhar Naskar (Editor)
Best art direction	Rajat Kamal and Rs 5,000	22 June 1897	Marathi	Jayoo Patwardhan (Art director),
Best actor	Rajat Kamal and Rs 10,000	Sparsh	Hindi	Naseeruddin Shah (Actor)
Best actress	Rajat Kamal and Rs 10,000	Passi	Tamil	Shobha (Actress)
Best child actor	Rajat Kamal and Rs 5,000	Angan Ki Kali.	Hindi	Geeta Khanna (Childactor)
Best music director	Rajat Kamal and Rs 10,000	Sankarbharanam	Telugu	K.V. Mahadevan (Music-director).
Best male play back singer	Rajat Kamal and Rs 10,000	Sankabharanam	Telugu	S.P. Balasubramaniam (Singer)
Best female play back singer	Rajat Kamal and Rs 10,000	Sankarabharanam	Telugu	Vani Jairam (Singer).
Best film in Hindi	Rajat Kamal and Rs 10,000	Sparsh	Hindi	Basu Battacharya (Producer). Also Rs 5,000 and Rajat Kamal to Sri Paranjpye (Director).
Award for the best feature film in regional languages	Rajat Kamal and Rs 10,000	Ekdin Pradidin	Bengali	Mrinal Sen (Producer). Also Rs. 5,000 and Rajat Kamal
—Do—	Rajat Kamal and Rs 10,000	Arivu	Kannada	K.R Lalitha (Producer). Also Rs. 5,000 and Raja Kamal to Kathe Ramachandra (Director).

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

—Do—	Rajat Kamal and Rs 10,000	Peruvazhiambalam	Malayalam	Prem Parkash (Producer) Also Rs 5,000 and Rajat Kamal to P. Padmarajan (Director).
—Do—	Rajat Kamal and Rs 10,0000	Olangthagee Wang-madasoo.	Manipuri	G. Narayan Sharma (Producer Also Rs 5,000 and Rajat Kamal to Aribam Shyam Sharma (Director).
—Do—	Rajat Kamal and Rs 10,000	Sihasan	Marathi	D.V. Rao and Jabbar Patel (Producers). Also Rs 5,000 and Rajat Kamal to Jabbar Patel (Director).
—Do—	Rajat Kamal and Rs 10,000	Srikrishnanka Rasa Leela.	Oriya	Chittu Ranjan Mohanty (Producer) also Rs 5,000 and Rajat Kamal to Sona Mukherjee (Director).
—Do—	Rajat Kamal and Rs 10,000	Pasi	Tamil	G. Lalitha (Producer). Also Rs 5,000 and Rajat Kamal to Durai (Director).
—Do—	Rajat Kamal and Rs 10,000	Nagna Satyam	Telugu	U. Visweswar Row (Producer-director). Also Rs 5,000 and Rajat Kamal to Director.
Best information film (documentary)	Rajat Kamal and Rs 5,000	The Kalbelias-Nomads of Rajasthan.	English	Tejbir Singh (Producer). Also Rs. 4,000 and Rajat Kamal to Valmik Thapar (Director).
Best educational/instructional film	Rajat Kamal and Rs 5,000	A Matter of Life and Death.	English	Films Division, Government of India (Producer). Also Rs 4,000 and Rajat Kamal to A.N. Parmesh (Director).
Best promotional film (non-commercial/ commercial).	Rajat Kamal and Rs 5,000	Story of Independence	English	Film Media, Bombay (Producer Also Rs 4,000 and Rajat Kamal to Film Media and Lintas (India) Ltd. Bombay (Director).
Best experimental film	Rajat Kamal and Rs 5,000	Child on a Chess Board	—	Films Division, Government of India (Producer) also Rs 4,000 and Rajat Kamal to Vijay B. Chandra (Director).
Best newsreel cameraman	Rajat Kamal and Rs 5,000	Indian News Review No 1585.	—	H.S. Advani (Cameraman).
Best Indian news review.	Rajat Kamal and Rs 5,000	Indian News Review No. 1592.	—	Films Division, Government of India (Producer).
Dada Saheb Phalke award	Swaran Kamal and a cash award Rs 40,000 and a shawl.			Sohrab Modi.

Swaran Kamal—Golden Lotus.
Rajat Kaml—Silver Lotus
1 Appendix to Chapter 10.

CC-0. Agamnigam Digital Preservation Foundation, Chandigarh

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

12. FOREIGN DIPLOMATIC REPRESENTATIVES IN INDIA

(*As on 5 May* 1980)

Country	Name	Designation	Address
Afghanistan	H.E. Mr Sayed Assif	Charged' Affairs	B-54 Greater Kavilash, Part I, New Delhi-110057.
Algeria	H·E. Mr Raouf Boudjikdji	Ambassador	13, Sunder Nagar, New Delhi-110003
Arab Republic of Egypt	H·E· Mr Hisham Amer	Ambassador	55-57 Sunder Nagar, New Delhi-110003.
Argentina	H.E. Mr Fernando Fernandez Escalante	Ambassador	3/11, Shantiniketan, New Delhi-110021.
Australia	H.E. Mr Gordon Noel Upton	High Commissioner	1/50-DG, Shantipath, Chanakyapuri, New Delhi-110021.
Austria	H.E. Dr George Hennig	Ambassador	18, Jor Bagh, New Delhi-110003.
Bangaladesh	H.E. Mr Abul Ehson	High Commissioner	56, Ring Road, Lajpat Nagar III, New Delhi-110024.
Belgium	H.E. Mr Jacques Graeffe	Ambassador,	7, Golf Links, New Delhi-110003.
Bhutan	H.E. Mr Lyonpo Sangye Penjor	Ambassador	Royal Bhutanese Embassy Chandragupta Marg, Chanakyapuri, New Delhi-110021.
Brazil	H·E. Mr Roberto Luiz Assumpcaode Araujo	Ambassador	8, Aurangzeb Road, New Delhi-110011.
Britain	H.E. Mr J.A. Thomson	High Commissioner	Shantipath, Chanakyapuri, New Delhi 1100021.
Bulgaria	H·E. Mr Tocho Tochev	Ambassador	16-17 Chandra Gupta Marg, Chanakayapuri, New Delhi.
Burma	H.E. U. Maung, Maung Shin	Ambassador	Plot No. 3, Block No. 50-F, Nayaya Marg, Chanakyapuri, New Delhi-110021.
Canada	H.E. Mr J. G. Hootwen	High Commissioner	7/8 Shantipath, Chanakyapuri, New Delhi-110021·
Chile	H.E. Mr Tomas Vasquez F.	Ambassador	1/13 Shanti Niketan, New Delhi-110004.
China	H.E. Mr Shen Jian	Ambassador	50-D, Shantipath, Chanakyapuri, New Delhi-110021.
Colombia	H.E. Mrs Nelly Turbay de Munoz	Ambassador	82-D, Malcha Marg, Chanakyapuri, New Delhi-110021.
Cuba	H.E. Dr Jose Lopez Sanchez	Ambassador	D-5, South Extension Part I, New Delhi-110049.
Cyprus	H.E. Mr· Andros A. Nicholaides	High Commissioner	52, Jor Bagh, New Delhi-110003.
Czechoslovakia	H.E. Mr Pavel Kanka	Ambassador	50-M, Niti Marg, Chanakyapuri, New Delhi-110021.
Denmark	H.E. Mr Per Welsch Frellesvig	Ambassador	2, Golf Links, New Delhi-110003.
Ethiopia	H.E. Brigadier General Amdemikael Belachew	Ambassador	7-50-G. Satya Marg, Chanakyapuri, New Delhi-110021.

Finland	H.E. Dr. Risto Ilmari Antero Hyvariven	Ambassador	25, Golf Links, New Delhi-110003.
France	H.E. Mr Andre Ross	Ambassador	2, Aurangzeb Road, New Delhi-110011.
German Democratic Republic	H.E. Mr Heinz Birch	Ambassador	2, Nyaya Marg, Chanakyapuri, New Delhi-110021.
Germany—Federal Republic of	H.E. Mr Rolf Ramisch	Ambassador	No. 6 Block 50-G, Shantipath, Chanakyapuri, New Delhi-110021.
Ghana	H.E. Mr Paul Boakye Duah	High Commissioner	A-42, Vasant Marg, Vasant Vihar, New Delhi-110057.
Greece	H.E. Mr. Dimitri Manolatos	Ambassador	16, Sundar Nagar, New Delhi-110003.
Guyana	H.E. Sir Edward Victor Luckhoo	High Commissioner	F-6/4, Vasant Vihar, New Delhi-110057.
Holy See	H.E. Most Rev. Msgr. Luciano Storero	Apostolic Pro-Nuncio	Niti Marg, Chanakyapuri, New Delhi-110021.
Hungary	H.E. Mr Janos Vertes	Ambassador	2/50-M, Niti Marg, Chankayapuri.
Indonesia	H.E. Vice-Admiral Syamsul Bahri Tjptosuhardjo	Ambassador	50-A, Chanakyapuri, New Delhi-110021.
Iran	H.E. Mr Abol Fazal Mojtahedi	Ambassador	65, Golf Links, New Delhi-110003.
Iraq	H.E. Mr Jihad George Karam	Ambassador	169-171, Jor Bagh, New Delhi-110003.
Ireland	H.E. Mr M. Reid	Charged, Affairs	13, Jor Bagh, New Delhi-110003.
Italy	H.E. Mr. Emilio Paslo Bassi	Ambassador	13, Golf Links, New Delhi-110003.
Japan	H.E. Mr Masso Kanazawa	Ambassador	4 & 5, Block 50-G, Chanakyapuri, New Delhi-110021.
Jordan	H.E. Mr Walid S. Durra	Ambassador	35, Malcha Marg, Chanakyapuri, New Delhi-110021.
Kenya	H.E. P. G. Gitonga	High Commissioner	E-66, Vasant Marg, Vasant Vihar, New Delhi-110057.
Korea—Democratic People's Republic of	H.E. Mr Ryu Tae Sop	Ambassador	42/44, Sunder Nagar, New Delhi-110003.
Korea—Republic of	H.E. Mr Bum Suk Lee	Ambassador	9, Chandragupta Marg, Chanakyapuri, New Delhi-110021.
Kuwait	H.E. Mr Essa Abdul Rahman Al-Essa	Ambassador	5-A, Shantipath, Chanakyapuri, New Delhi-110021.
Laos	H.E. Mr. Kithong Vongsay	Ambassador	20, Jor Bagh, New Delhi-110003.
Lebanon	H.E. Mr Rabia Maider	Ambassador	10, Sardar Patel Marg, Chanakyapuri, New Delhi-110021.
Libya	H.E. Dr Mohammed Yousuf AlMagariaf	Ambassador	20-22, Golf Links, New Delhi-110003.
Malayasia	H.E. Mr Mon Jamaluddin	High Commissioner	50-N, Satya Marg, Chanakyapuri, New Delhi-110021.
Mauritius	H.E. Mr Rajmohunsing Jomadar	High Commissioner	5, Kautilya Marg, Chanakyapuri, New Delhi-110021.
Mexico	Mr. Jesus Garcia Chavez	Charged' Affairs	N-88, Panch Sheela, Park, New Delhi-110057.

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

Country	Name	Designation	Address
Mongolia	H.E. Mr Badamtaryn Baldoo	Ambassador	34, Golf Links, New Delhi-110003.
Morocco	H.E. Mr Abdelkhalek Ih Ibrahim	Charged' Affairs	33, Golf Links, New Delhi-110003.
Nepal	H.E. Mr Vedanand Jha	Ambassador	Barakhamba Road, New Delhi-110001.
Netherlands	H.E. Mr Hendricus Leopold	Ambassador	6/50F, Shantipath, Chanakyapuri, New Delhi-110021.
New Zealand	H.E. Mr Donald Geofficy Harper	High Commissioner	39, Golf Links, New Delhi-110003.
Nigeria	H.E. Chief John Olatunji Omolodun	High Commissioner	21, Palam Marg, Vasant Vihar, New-Delhi-110057.
Norway	H.E. Mr Per Gulowsen	Ambassador	Kautilya Marg, Chanakyapuri, New Delhi-110021.
Oman	H.E. Mr Ahmed Hamoud Al-Maamiry	Ambassador	1/17 Shantiniketan, New Delhi-110021.
Pakistan	H.E. Mr Abdul Sattar	Ambassador	2/50-G, Shantipath, Chanakyapuri, New Delhi-110021.
Peru	H.E. Mr Juan Vargas Quintanilla	Ambassador	3/5, Shantiniketan (First Floor) New Delhi-110021.
Phillippines	H.E. Mr R.S. Busuego	Ambassador	50-N, Nyaya Marg, Chanakyapuri, New Delhi-110021.
Poland	H.E. Mr Jan Czapla	Ambassador	Shantipath, Chanakyapuri, New Delhi-110021.
Portugal	H.E. Mr Joao Eduardo Monteverde Pereira Bastos	Ambassador	A-24, West—End Colony, New Delhi-110021.
Qatar	H.E. Dr Hasan Ali Hussain-Al-Ni Mah	Ambassador	A-3, West-End Colony, New Delhi-110021.
Romania	H.E. Dr Domitru Niculescu	Ambassador	9, Tees January Marg, New Delhi-110011.
Saudi Arabia	H.E. Shaikh Saleh A. Al-Sugair	Ambassador	1, Ring Road, Kilokri New Delhi-110014.
Senegal	H.E. Dr Babacar Diop	Ambassador	F-63, Poorvi Marg, Vasat Vihar, New Delhi-110057.
Singapore	H.E. Mr Tuan Haji Ya'acob Bin Mohamed	High Commissioner	B-70, Greater Kailash, New Delhi-110048.
Somalia	H.E. Mr Abdullahi Egal Nur	Ambassador	B-23, Greater Kailash-I, New Delhi-110048.
Spain	H.E. Mr Leopoldo Martinez De Camposk	Ambassador	12, Prithviraj Road, New Delhi-110011.

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

Sri Lanka	H.E. Mr. Theodore Braybrooke Panabokke	High Commissioner	27, Kautilaya Marg, Chanakyapuri, New Delhi-110021.
Sudan	H.E. Mr Ibrahim Taha Ayoub	Ambassador	6, Jorbagh, New Delhi-110003.
Swedan	H.E. Mr Lennart Finmark	Ambassador	Nyaya Marg, Chanakyapuri, New Delhi 110021
Switzerland	N.E· Etienne Suter	Ambassador	Nyaya Marg, Chanakyapuri, New Delhi-110021.
Syria	H.E. Mr Abdallah Fikri El-Khani	Ambassador	28, Vasant Marg, Vasant Vihar, New Delhi-110057.
Tanzania	H.E. Mr George M. Nhigula	High Commissioner	27, Golf Links, New Delhi-110003.
Thailand	H.E. Dr Suchati Chuthasmit	Ambassador	56-N, Nyaya Marg, New Delhi-110021.
Trinidad and Tobago	H.E. Mr Nathan Hazel	High Commissioner	131 Jor Bagh, New Delhi-110003.
Turkey	H.E. Mr Ali Hikmet Alp	Ambassador	27, Jor Bagh, New Delhi-110003.
Uganda	H.E. Mr Felix Okoboi	High Commissioner	61, Golf Links, New Delhi-110003.
USSR	H.E. Mr Yuli Mikhailovich Vorontsov	Ambassador	Shantipath, Chanakyapuri, New Delhi-110021.
United Arab Emirates	H.E. Mr Mohamed Abdul Lateef Rashed	Ambassador	A-7, West End, Rao Tula Ram Marg, New Delhi-110021.
United States of America	H.E. Dr. Robert F. Goheen	Ambassador	Shantipath, Chanakyapuri, New Delhi-110021.
Venezuela	H.E. Mr Tulio Cardozo Faria	Ambassador	N-114 Panchsheela Park, New Delhi-110017.
Viet-Nam	H.E· Mr Nguyen Van Sinh	Ambassador	35, Prithviraj Road, New Delhi-110011.
Yeman People's Democratic Republic of	H.E. Mr Abu Baker Saced Ba-Abbad	Charged' Affairs	B-80, Greator Kailash-I, New Delhi-110048.
Yugoslavia	H.E. Mr Andjelko Blazevic	Ambassador	3/50/G, Niti Marg, Chanakyapuri, New Delhi-110021.
Zaire	H.E. Mr. Boking Embeyolo	Ambassador	160, Jor Bagh, New Delhi-110003.
Zambia	H.E. Mr A.C. Chalikulima	High Commissioner	14 Jor Bagh, New Delhi-110003.
CONSULATES			
Monaco	Mr. R. Chattaram	Consul General (Honorary)	114, Sunder Nagar, New Delhi-110003.
San Marino	Mr Bhai Mohan Singh	Consul General (Honorary)	15, Aurangzeb Road, New Delhi-110011.
Iceland	Mr. Sashi Bhushan Saran	Consul General (Honorary).	D-35, Pamposh Enclave, New Delhi-110048.

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

13. INDIA'S REPRESENTATIVES ABROAD

(As on 5 May 1980)

Country	Name	Designation	Address	Remarks
EMBASSIES				
Afghanistan	J.S. Teja	Ambassador	Embassy of India, Malai Wa Shahr-e-Nau, Kabul.	
Algeria	K.M. Lal (desig.)	Ambassador	Embassy of India, 119 ter, Rue Didouche Mourad, 4th floor, Algiers.	
Argentina	R.K. Anand	Ambassador	Embassy of India, Paraguary 580 (3rd floor), Buenos Aires.	Concurrently accredited as Ambassador to Paraguay and Uruguay.
Austria	K.L. Dalal	Ambassador	Embassy of India, Opernring Stiege R/ VIII, A-1010, Vienna-1.	Permanent Representative of India to the International Organizations in Vienna.
Bahrain	H.K. Mahajan	Ambassador	Embassy of India, No 229917A Adlia Area, Jufair, Bahrain, P.O. Box No. 5106, Bahrain.	
Belgium	P.K. Dave	Ambassador	Embassy of India, 121, Avenue Moliere, 1180, Brussels.	Concurrently accredited to Grand Dutchy of Luxemburg, the European Economic Community and the Evropean Coal and Steel Community. Also India's Permanent Represntative to GATT
Bhutan	J.R. Hirenath	Ambassador	Embassy of India, Lungtenzempa, Thimpu.	
Bolivia	B.K. Basu	Ambassador	Embassy of India LA PAZ, C/o Embassy of India, Santiago.	Ambassador resident in Santiago.
Brazil	H.S. Vahali	Ambassador	Embassy of India, Edificio Venacio VI, Block 'O' 5th Floor Sector de Diversoes Sul, Brasili A.D.F.	
Bulgaria	B. Deva Rao (desig)	Ambassador	Embassy of India, 31, Blvd. Patriarch Eftimii, Sofia.	
Burma	Amiya Nath Bose	Ambassador	Embassy of India, Oriental Assurance Building 545/547 Merchant St. Box. No. 751, Rangoon.	

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

Burundi	A.K. Dass (desig.)	Ambassador	Embassy of India, Bujumbura, C/o High Commission of India, Kampala.	Resident in Kampala.
Cambodia	Vacant	Ambassador	Embassy of India, Pnom Penh.	
Cameroon	Smt. K. Rukmini Menon	Ambassador	Embassy of India, Yaonde, C/o High Commission of India, Lagos.	Resident in Lagos.
Central African Empire	M.K. Khisha	Ambassador	Embassy of India, Central Afrcan Empire, C/o Embassy of India, Kinshasa.	Resident in Khartoum
Cape Verde Islands	K. Gajendra Singh	Ambassador	Embassy of India, Cape Verde Islands, C/o Embassy of Indi, Dakar.	Resident in Dakar.
Chad	S.M.S. Chadha	Ambassador	Embassy of India, Chad, C/o Embassy of India, Khartoum.	Resident in Khartoum.
Chile	B.K. Basu	Ambassador	Embassy of India, 871, Triana, Post Box No. 10433, Santiago.	Concurrently accredited as Ambassador to Bolivia.
China	K.S. Bajpai (desig.)	Ambassador	Embassy of India, 1, Jih Tan Tung Lu Peking.	
Colombia	K.C. Lalvunga	Ambassador	Embassy of India, Carrera 7, No. 87-20, Apartment No. 104, Bogota.	
Comores	A.W.B. Vaz.	Ambassador	Embassy of India, Comores, C/o Embassy of India, Antananarivo.	Resident in Antananarivo.
Congo	M..K. Khisha	Ambassador	Embassy of India, Brazzavill, C/o Embassy of India, Kinshasa.	Resident in Kinshasa.
Costa Rica	Miss N.N. Haralu	Ambassador	Embassy of India, San Jose C/o Embassy of India, Panama.	Resident in Panama.
Cuba	P.M.S. Malik	Ambassador	Embassy of India, Calle, 21 Nro, 202, esquina a K. Vedado, Havana.	
Czechoslovakia	K.K.S. Rana	Ambassador	Embassy of India, Valdstejnska-6, Malastrana, Prague-1.	
Denmark	Prem Shanker	Ambassador	Embassy of India, Vengehusvej 15, Copenhagen.	
Ecuador	S.K. Katapaha	Ambassador	Embassy of India, Ecuador, C/o Embassy of India, Lima.	Resident in Lima.
Arab Republic of Egypt	K.P.S. Menon	Ambassador	Embassy of India 5, El Shaer Aziz, Abaza Street, Zamalek, Post Box 718, Cairo.	

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

Country	Name	Designation	Address	Remarks
Equatorial Guinea	M.K. Khisha	Ambassador	Embassy of India, Equatorial Guinea, C/o Embassy of India, P.O. Box 1026, Kinshasa.	Resident in Kinshasa.
Ethiopia	Vinay Verma	Ambassador	Embassy of India, Rabena (Aware District) Post Box No 528, Addis Ababa.	
Finland	Madanjeet Singh (desig.)	Ambassador	Embassy of India, Annankatu, 15B 14 (5th floor) 00120 Helsinki-12.	
France	M. Rasgotra	Ambassador	Embassy of India, 15 Rue Alfred Dehodencq. Paris-16.	
Gabon	M.K. Khisha	Ambassador	Embassy of India, Gabon, C/o Embassy of India, Kinshasa.	Resident in Kinshasa.
German Democratic Republic	K. Raghunath	Ambassador	Embassy of India, 108-Berlin Clara Zetkin-strasee/89/06.	
Germany Federal Republic	M.A. Rahman	Ambassador	Embassy of India, 262, Adenauerallee, 5300, Bonn.	
Greece	L.N. Rangarajan	Ambassador	Embassy of India, 10, Merlin Street, Athens 134.	
Guatemala	D.S. Kamtekar	Ambassador	Embassy of India, Guatemala, C/o Embassy, of India, Mexico Ctiy.	Resident in Mexico Ciy.
Guinea	V.P. Singh	Ambassador	Embassy of India, Kebe Building, 3rd Floor, B.P. 186/ bis Conakry-1.	
Guinea Bissau	K. Gajendra Singh	Ambassador	Embassy of India, Bissau, C/o Embassy of India, Dakar.	
Holy See	Gurbachan Singh	Ambassador	Embassy of India, Holy See, C/o Embassy of India, Berne.	Resident in Dakar.
Hungary	A. K. Dass	Ambassador	Embassy of India, Buzavirag, Utca-14, Budapest-II.	
Iceland	G.G. Swell	Ambassador	Embassy of India, Reykjavik, C/o Embassy of India, Oslo.	Resident in Oslo.
Indonesia	S.K. Bhutani	Ambassador	Embassy of India, 44 Kebon Sirih, Jakarta.	
Iran	A.M. Khaleeli	Ambassador	Embassy of India, No. 166, Avenue Sabah Shomali Off Takhte Jamshid, Post Box No. 2473, Tehran.	

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

Iraq	P.L. Sinai	Ambassador	Embassy of India, Taha Street, Najeeb Pasha, Adhamiya, Baghdad.	
Ireland	Manabendra Shah	Ambassador	Embassy of India, 3, Leeson Park, Dublin-6.	
Italy	Vacant	Ambassador	Embassy of India, Via Venti Settembre, 5 Rome.	Concurrently accredited as High Commissiner to Malta.
Ivory Coast	V.K. Menon	Ambassador	Embassy of India, B.P. 318, Abidjan.	
Japan	V.K. Ahuja	Ambassador	Embassy of India, 2-11, Kuden Mirami, 2-Chome Mhiyoda-ku, Tokyo.	
Jordan	Abdul Ghani Goni	Ambassador	Embassy of India, Taufic Marar Building near Ist Circle, Jabel, Post Box 2168, Amman.	
Korea—Republic of	V.V. Paranjpe	Ambassador	Embassy of India, San-2-1, Bok-wang-Dong, Yongan Ku, (Behind Bowling Centre), Seoul.	
Korean, Democratic People's Republic.	R.K. Manucha	Ambassador	Embassy of India, Block 66, Munsudong district Dadong Youn Pyong Yang.	
Kuwait	S.J.S. Chattwal	Ambassador	Embassy of India, 34 Share Istiqlal, P. O. Box No. 1450 (Safat), Kuwait.	
Laos	P.R. Sood	Ambassador	Embassy of India, Rue that Luang, P.O. Box No. 225, Vientiane.	
Lebanon	Y.R. Dhawan	Ambassador	Embassy of India, 31, Kantari Street Saharani Building, P.O. Box No. 1764, Beirut.	Concurrently accredited as High Commissioner to Cyprus.
Liberia	P.A. Nazareth	Ambassador	Embassy of India, Monrovia C/o High Commission of India, Accra.	Resident in Accra.
Libya	Narender Singh	Ambassador	Embassy of India, 16/18 Armondi Garden City, P.O. Box, 3150, Tripoli.	
Luxembourg	P.K. Dave	Ambassador	Embassy of India, Grand Dutchy of Luxembourg, C/o Embassy of india, Brussels.	Resident in Brussels.
Malagasy Republic	A.W.B. Vaz	Ambassador	Embassy of India 4, talana Rajaonson Emile, Antananarivo.	Concurrently accredited as Ambassador to Comore.

CC-0. Agamnigam Digital Preservation Foundation, Chandigarh

Country	Name	Designation	Address	Remarks
Maldives	Thomas Abraham	Ambassador	Embassy of India, Mafunna Aage, No. 37, Orchid Road, Marannu, Male.	Resident in Colombo.
Mali	K. Gajendra Singh	Ambassador	Embassy of India, Bammako, C/o Embassy of India, Dakar.	Resident in Dakar.
Mauritania	U. C. Soni	Ambassador	Embassy of India, Nouack-choott, C/o Embassy of India, Rabat.	Resident in Rabat.
Mexico	D. S. Kamtekar	Ambassador	Embassy of India, Masset, 325, Colonia Polaneo, Mexico, 5, D.F.	Concurrently accredited to Guatemala and Elsalvador, as Ambassador.
Mongolian Peoples Republic	G. N. Roa	Ambassador	Embassy of India, 126—Peace Street, P. O. Box No. 691 Ulan, Bator.	
Morocco	U. C. Soni	Ambassador	Embassy of India, 10, Avenue de Champagne (Agdal) Rabat.	Concurrently accredited as Ambassador to Maritania.
Mozambique	O. N. Sheopuri	Ambassador	Embassy of India, Avendia Kenneth Kaunda, P.B. No. 4751, Maputo.	Concurrently accredited as High Commissioner to Swaziland.
Nepal	N. P. Jain	Ambassador	Embassy of India, G.P.O. Box No. 292, Kathmandu.	
Netherlands	Miss C. B. Muthamma	Ambassador	Embassy of India, Buitenrust-weg, 2, The Hague.	
Nicaragua	Miss N. N. Haralu	Ambassador	Embassy of India, Nicaragua, C/o Embassy of India, Panama.	Resident in Panama.
Niger	Smt. K. Rukmini Menon	Ambassador	Embassy of India, Niger, C/o High Commission of India, Lagos.	Resident in Lagos.
Norway	G. G. Swell	Ambassador	Embassy of India, Skovveien, 12, 2nd Floor, OSLO-2.	Concurrently accredited as Ambassador) to Iceland, (Reykjavik).
Oman	K. C. Lalvunga (desig.)	Ambassador	Embassy of India, P.O. Box 77, Muscat.	
Pakistan	K. Natwar Singh (desig)	Ambassador	Embassy of India, 482-F, Sector G-6/4, Islamabad.	
Panama	Miss N. N. Haralu	Ambassador	Embassy of India, Post Box 8400, Apartment No. 1, Edifiscio Ferrari Calle 50Y, via Brazil, Panama.	Concurrently accredited as Abassador to Costa Rica & Nicaragua.

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

Paraguay	R. K. Anand	Ambassador	Embassy of India, Asuncion C/o Embassy of India, Buenos Aires.	Resident in Bueos Airens
Peru	S. K. Kathsalia	Ambassador	Embassy of India, San Ignacio Loyala 150, Mirafiores, Lima.	Concurrently accredited as Ambassador to Equator.
Philippines	L. N. Ray	Ambassador	Embassy of India, Coamer, Building, Salcedost, legaspi village P. O. Box 926-MCC, Makati Metro, Manila.	
Poland	M. R. Sivaramakrishnan	Ambassador	Embassy of India, Rajtana 15, Flats 2 to 7 Mokotow, Warsaw-02-516.	
Portugal	A. R. Kakodkar	Ambassador	Embassy of India, Rua das Amoreiras 7-D, 6th Floor 1200, Lisbon-1.	
Qatar	R. C. Shukla	Ambassador	Embassy of India, Sheikh Suheim Villa No. 5 El Sheikh Suheim Street, Post Box No. 2788 Doha.	
Rumania	A. K. Ray	Ambassador	Embassy of India, 16 Str Stefan Gheorghiu Bucharest.	
Rwanda	A. K. Dass	Ambassador	Embassy of India, Kigali, C/o High Commission of India, Kampala.	Resident in Kampala.
Saudi Arabia	A. K. Hafizka	Ambassador	Embassy of India, Ibrahim Masoud Building, Medina Road, Baghdadia, P. O. Box 952, Jeddah.	
Senegal	K. Gajendra Singh	Ambassador	Embassy of India, Immeuble Danial Sorano Avenue dela Republique, 9th floor, P.B. 398, Dakar.	Concurrently accredited as Ambassador to Cape Verde Islands, Mali, Guinea Bissau and High Commissioner to Gambia.
Somalia	T. Srinivasan	Ambassador	Embassy of India, Via Balad, P. B. No. 955, Mogadishu.	
Spain	S. S. Alirajpur	Ambassador	Embassy of India, Velazquez 93, Madrid-6.	
Sudan	S. M. S. Chadha	Ambassador	Embassy of India, No. 2 El Mek Nimir Street, P.O. Box 707, Khartoum.	Concurrently accredited to Chad as Ambassador.
Surinam	Rajendranath Gupta	Ambassador	Embassy of India, Kromme Elleboogstraat 5, Paramarib.	

CC-0. Agamnigam Digital Preservation Foundation, Chandigarh

Country	Name	Designation	Address	Remarks
Sweden	N.P. Alexander	Ambassador	Embassy of India, Adolf Fredriks Kyrkogata12 II Box 1340 S-11183, Stockholm.	
Switzerland	Gurubachan Singh	Ambassador	Embassy of India, Weltpost-strasse 17, Berne 3015.	Concurrently accredited to the Vatcan & Holy See as Ambassador.
Syrian	Vacant	Ambassador	Embassy of India, 40/46 Adhan Malki Street, Yassin Nou-welati Bldg.; P.B. 685, Damascus.	
Thailand	K. L. Dalal	Ambassador	Embassy of India, 139 Pan Road, Bangkok.	Also Permanent Representa-tive of India to ESCAP.
Togo	P. A. Nazareth	Ambassador	Embassy of India, Lome, C/o High Commission of India, Accra.	Resident in Accra.
Tunisia	S. R. Chaudhuri	Ambassador	Embassy of India, 6 Rue Felician Challaye, Belvedere, Tunis.	
Turkey	N. N. Jha	Ambassador	Embassy of India No. I Fatma Aliye Sokat, Kavaklidese Ankara.	
United Arab Emirates	L. Man Singh	Ambassador	Embassy of India, Said Muharbi Building (behind Al Masood, Villas Khalidia) P.O. Box 4090 Abu Dhabi.	
Upper Volta	P. A. Nazerath	Ambassador	Embassy of India, Ouaga-dougou, C/o High Com-mission of India, Accra.	Resident in Accra.
Uruguay	R. K. Anand	Ambassador	Embassy of India, Montevideo, C/o Embassy of India, Buenos Aires.	Resident in Buenos Aires.
U.S.A.	Vacant	Ambassador	Embassy of India, 2107 Mas-sachussetts, Avenue N. W. Washington, D.C. 20008.	Concurrently accredited to Bahamas as High Commis-sioner.
US.S.R.	I. K. Gujral	Ambassador	Embassy of India No. 6-8 Ulitsa Obukha, Moscow.	
Venezuela	Shiv Kumar	Ambassador	Embassy of India, Edificio Neuvo Centro Piso 7, Officina B Avenida, Libertador, Aparatado de Correos del Este. 61585, Chacao, Antilles, Caracas-106.	Consul General for Nether-lands Antilles.

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

CC-0. Agamnigam Digital Preservation Foundation, Chandigarh

Socialist Republic of Vietnam	G. Raj	Ambassador	Embassy of India, No. 58, Tran Hung Dao, Hanoi. Hung Dao, Hanoi.	
Yemen Arab Republic	J.S. Doddamani (desig).	Ambassador	Embassy of India Al Jawahar Area-off Zuberi Road, Post Box No. 1154, Sanaa.	
Yemen Peoples Democratic Republic	I.M. Kanga	Ambassador	Embassy of India, Premjee Chambers, Steamer Point, Aden.	
Yugoslavia	A.S. Chib	Ambassador	Embassy of India, Dositejeva 26, Belgrade.	
Zaire	M.K. Khisha	Ambassador	Embassy of India, P.B. No. 1026, 18 B Avenue des Batetela, Gombe, Kinshasa.	Concurrently accredited as Ambassador to Gabon Congo (Brazzaville) central African Republic and Equatorial Guinea.

HIGH COMMISSIONS

Australia	K.D. Sharma	High Commissioner	High Commission of India, 135, Monaro Crescent Red Hills, Canberra A.C.T. 2603.	
Bangladeh	M. Dubey	High Commissioner	High Commission of India, Road, No. 2, Dhanmondi Residential Area, Dacca-2.	
Bahamas	Vacant	High Commissioner	High Commission of India, Bahamas, C/o Embassy of India, Washington.	Resident in Washington.
Barbados	Gaj Singh Jodhpur	High Commissioner	High Commission of India, Bridgetown, C/o High Com- High Commission of India, Port of Spain.	Resident in Port of Spain (Trinidad)
Botswana	K. Natwar Singh	High Commissioner	High Commissioner of India, Gaberones, C/o High Commission of India, Lusaka.	Resident in Lusaka.
Canada	Gen .T.N. Raina	High Commissioner	High Commission of India, 200 Maclaren Street, Ottawa (Canada), K 2 POL 6.	
Cyprus	Y.R. Dhawan	High Commissioner	High Commission of India, Nicosia, C/o Embassy of India, Beirut.	Resident in Beirut.

ountry	Name	Designation	Address	Remarks
Fiji	Smt. S. Kochar	High Commissioner	High Commission of India, Suite No. 202, Fiji, Development Bank Building, G.P.O. Box 405, Victoria Parade, Suva.	Jurisdiction extends to the UN Trust Territory of Caroline and Marshal Island, Soloman Island, New Hebrides, & Gilbert and Elice Islands, New Caledonia, and Society Islands. Also concurrently accredited as High Commissioner of India to Kingdom of Tonga & Republic of Nauru and also to Papua New Guinea.
Gambia	K. Gajendra Singh	High Commissioner	High Commission of India, Bathurst, C/o Embassy of India, Dakar.	Resident in Dakar.
Ghana	P. A. Nazareth	High Commissioner	High Commission of India, 5, Monkata Avenue, Airport Residential Area, P. O. Box 3040, Accra.	Concurrently accredited to Togo, Liberia and Upper Volta as Ambassador.
Grenada	Gaj Singh Jodhpur	High Commissioner	High Commission of India, C/o High Commission of India, Trinidad.	Resident in Trinidad.
Guyana	J. N. Bhatt	High Commissioner	High Commission of India, No. 10 Avenue of the Republic, Georgetown.	
Jamaica	D. C. Manners	High Commissioner	High Commission of India, No. 4, Retreat Avenue, P.O. Box 446, Kingston.	
Kenya	A. N. D. Haksar	High Commissioner	High Commission of India, Jeevan Bharati, 2nd Floor Harambee Avenue, P.O. Box No. 30074 Nairobi	Concurrently accredited to Seychelles as High Commissioner and accredited as Permanent Representative of India to the United Nations Environment Programme.
Lesotho	P. S. Sahai	High Commissioner	High Commission of India, Maseru, C/o High Commission of India.	Resident in Lilongwe.
Malawi	P. S. Sahai	High Commissioner	High Commission of India, Kamuzu Procession Road, 'Progress House, P.O. Box No. 681, Lilongwe.	Concurrently accredited to Lesotho as High Commissioner.

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

Malaysia	Prakash Shah (desig.)	High Commissioner	High Commission of India, 19, Jalan, Melaka, United Asian Bank Berhad Building, Kuala Lumpur.	Concurrently accredited to Burnei as High Commission.
Malta	Narendra Singh	High Commissioner	High Commission of India, Valletta, C/o Embassy of India, Tripoli.	Resident in Tripoli.
Mauritius	Vacant	High Commissioner	High Commission of India Bank of Baroda Building 5th Floor, Sir William Newton Street, Port Louis.	
Newzealand	A. K. Budhiraja (desig)	High Commissioner	High Commission of India, 49, Willis Street, Willington.	Concurrently accredited High Commissioner to Western Samoa.
Nigeria	Smt K. Rukmini Menon	High Commissioner	High Commission of India, 107, Awolowo Road. P.M.B. 2322 South West Ikoyi, Lagos.	Concurrentlv ccredited as Ambassador to Republics of Banin Cameroon. and Niger.
Papua New Guinea	Smt. S. Kochar	High Commissioner	High Commission of India, Papua, New Guinea, C/o High Commission of India, Suva.	Resident in Suva.
Seychelles	A. N. D. Haksar	High Commissioner	High Commission of India, Seychelles, C/o High Commission of India, Nairobi.	Resident in Nairobi.
Sierra Leone	V. P. Singh	High Commissioner	High Commission of India, Freetown, C/o Embassy of India, Conakry.	Resident in Conakry.
Singapore	B. M. Oza	High Commissioner	High Commission of India, India House, 31 Grange Road Killiney Road, Singapor.	
Sri Lanka	Thomas Abraham	High Commissioner	High Commission of India, State Bank of India Building 18·3/1, Sir Baron Jayatilleke Mawatha, Fort Colombo-1.	Concurrently accredited to Maldives as Ambassador.
Swaziland	O. N. Sheopuri	High Commissioner	High Commission of India, Mbabane, C/o Embassy of India, Maputo.	Resident in Maputo.
Tanzania	A. S. Gonsalves	High Commissioner	High Commission of India, 11th floor 'A Wing,' NIC, Investment House, Mirambo Street, Dar-Es-Salaam.	

CC-0. Agamnigam Digital Preservation Foundation, Chandigarh

Country	Name	Designation	Address	Remarks
Kingdom of Tonga	Smt. S. Kochar	High Commissioner	High Commission of India, Tonga, C/o High Commission of India, Suva.	Resident in Suva.
Trinidad & Tobago	Gaj Singh Jodhpur	High Commissioner	High Commission of India, 87, Cipriani Oulevard, Port of Spain.	Concurrently accredited as High Commissioner to Barbados and Grenada Commissioner to the Associated States-Antigua Dominica St. Kitts-Nevi-Anguilla, St. Lucia, Commissioner to St. Vincen Montsearrat the Turks and Caicos, and also Cayman Islands.
Uganda (Andang)	A.K. Dass	High Comissioner	High Commission of India, Bank of India Building Kampala Road, Kampala.	Concurrently accredited Ambassador in Rwanda and Rwanda and Burundi.
United Kingdom	Vacant	High Commissioner	High Commission of India, India House, Aldwyeh, London W.C. 2 N.A.	
Western Samoa	A.K. Budhiraja	High Commissioner	High Commission of India, Apia, C/o High Commission of India, Wellington.	Resident in Wellington.
Zambia	Vacant	High Commissioner	High Commission of India, Anchore, House, Lusaka House, Cairo Road, Lusaka.	Concurrently accredited as High Commissioner for India to Botswana.
SPECIAL MISSIONS				
Bhutan	J.R. Hirenath	Ambassador	Embassy of India, Lungtenzempa, Thimpu.	
United Nations(a) New York	B.C. Mishra	Ambassador/Permmanent Representative	Permanent Mission of India to the United Nations, New India House, 3 East 64th Street, New York.	
(b) Geneva	C.R. Gharekhan	Ambassador/Permanent Repersentative.	Permanent Mission of India to the United Nations, Geneva.	
(c) Vienna	K.L. Dalal	Ambassador/Permanent Representative.	Permanent Mission of India to the Internatonal Organisations in Vienna, Opening 1, Stiege Vienna.	

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

Belgium	P.K. Dave	Ambassador	Mission of India to the European Economic Community and European Coal & Steel Community Avenue Moliere 129, Brussels-1180.	
Kenya	A.N.D. Haksar	Permanent Representative.	Permanent Representative of India to the United Nations, Environment Programme, Nairobi.	
COMMISSIONS				
Hong Kong	M.K. Mangalmurti	Commissioner	Commission of India, 304, AIA Building, 1 Sutubbs Road, Hong Kong.	
Kenya	B.P.S. Kapoor	Assistant Commissioner.	Commission of India, LIC Building Nkrumaha Road, Mombassa	
CONSULATES GENERAL AND CONSULATES (A) CONSULS GENERAL				
Australia	Inderjeet Singh	Consul General	Consulate General of India, Caltex House, 10th Floor, 167-187, Kent Street, Sydney, N.S.W. 2000.	
Canada (Vancouver)	B.K. Mitra	Consul General	Consulate General of India, 325, Howe Street, (Ist Floor) Vancouver 1 (B.C.)	
Canada (Toronto)	P.N. Soni	Consul General	Consulate General of India, Suite 2900, Hudson's Bay Centre, 2nd Floor Street, East Toronto (Ontario)	
Dubai	M. Venkataraman	Consul General	Consulate General of India, Dubai.	
Federal Republic of Germany	P.C. Govil	Consul General	Consulate General of India,	
(a) West Berlin		Consul General	Consulate General of India, Joachimastater, Stresse-28 (Ist floor) West Berlin-15.	
(b) Frankfurt	Ranjit Gupta	Consul General	Consulate General of India, Wlhelm-Leuschnerstasse 93 (2nd Floor) 6 Frankfurt Main.	Consular Jurisdiction includes the States of Hessen, Saarland and Rhenlandpfalz.
(c) Hamburg	Aftab Seth	Consul General	Consulate General of India, 'Sprinkenhof, 6th Floor Burchardstrasle 14 VI, 2 Hamburg-1.	Consular Jurisdiction includes the States of Hamburg, Bremen, Schlewig Holstein and Lower Saxoy.

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

Country	Name	Designation	Address	Remarks
Indonesia	R.S. Garg	Consul General	Consulate General of India, 19, Djalan Uskup Agung A Medan.	
Japan	M.L. Trivedi	Consul General	Consulate General of India, Shanti Building, 5th Floor, 30, Nakayamate-dori, 1-Chome, Ikuta-ku, Kobe.	
San Marino	L.T. Pudaite	Consul General	Consulate General of India, San Marino, C/o Embassy of India, Rome.	Resident in Rome.
Arab Republic of Egypt	Vacant	Consul General	Consul General of India, 22, Saleh Salem Street.	
United States of America	P.P.D' Souza (desig)	Consul General	Consulate General of India, 3, East 64th Street, New York, N.Y. 10021.	
(b) San Francisco	Ishrat Aziz	Consul General	Consulate General of India, 215, Market, San Francisco, California 94105.	
(c) Chicago	S.K. Bhatnagar	Consul General	Consulate General of India, Government of India, Tourist Office, 201, North Michigan Ave, Chicago, Illinois, 60601 U.S.A.	
U.S.S.R. (Odessa)	D.S. Khosla	Consul General	Consulate General of India, 31, Kirova Street, Odessa.	
Switzerland	Vacant	Consul General	Consulate General of India, 7-9 Rue Du Valasis (6th Floor) 1202 Geneva.	
Tanzania	J. Banerjee	Consul General	Consulate General of India, Magombani, Zanzibar, (Congendia) Zanzibar.	
Pakistan	M.S. Aiyar.	Consul General	Consulate General of India, 3, Fatima Jinnah Road, Karachi-4.	
CONSULS				
Afghanistan				
(a) Jalalabad	K.C. Bhardwaj	Consul	Consulate of India, 146 Nahiva Shahr-e-Nau, Jalalabad.	
(b) Kandhar	P.K. Takkar	Consul	Consulate of India, Kandhar.	

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

Burma	B.D. Sharma	Consul	Consulate of India, 68th Street Between 27/28th Road, Mandalay.
Iran			
(a) Khorramshahar	K.T. Subbiah	Consul	Consulate of India, 160 Ferdousi Avenue, Khorramshahr.
(b) Zahidan	Gurdeep Singh	Consul	Consulate of India, Avenue Mehran-130, Zahidan.
Iraq	Y. Singh	Consul	Consulate of India, Palestine Road, Basrah.
Thailand	K.S. Sastry	Consul	Consulate of India, No. 82/2, Keo Navarath Road, Chiang Mai.
HONY. CONSULS GENERAL AND HONY. CONSUL			
Djibouti	S.J. Kothari	Consul	Consulate of India, Post Box No. 171, Djibouti.
(a) Ghent	Robert Despreahins	Consul General	Consulate General of India, Lt. Willemotlaan, 9910 Mariakerke, Ghent.
(b) Belguem Antwerp	F.L.C. Bertrand	Consul General	
Denmark	Victor B. Strand	Consul General	Consulate General of India, Kronprinsessegade 36, DK 1306, Copenhagen K.
Equador	Jack Bermes Cevallos	Consul General	Consulate General of India, Banco Central Equador, Quito.
Germany			
(a) Munich	Robert Gedon	Consul General	Consulate General of India, 8 Munich , Leopold Str. 87, Munich-2.
(b) Stuttgart	Dr. R. Kissel	Consul General	Consulate General of India, 7 Stuttgart Degerlock, Waldstr 57, Stuttgart.
Italy (Genoa)	Jack Clerici	Consul	Consulate General of India Via Martin Piaggio-15.

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

Country	Name	Designation	Address	Remarks
Italy (Milan)	Dr. Nino Trapani	Consul General	Consulate General of India, Milan Via Goito 11-20151 Milan.	
Paraguay (Asuncion)	Antonio Rodolfo Zuccolillo	Consul General	Consulate General of India, Cerro Coray Paragurai, Asuncion.	
Guatemala	Ulrich W. Rasch	Consul	Consulate of India, P.O. Box No. 886, Via 4,5—52 Zona 4 Esquina 6a, Avenida, Guatemala.	
Poland (Gydnia)	S. K. Verma	Consul	Consulate of India, Gydnia, Panama I,R.P.	
Spain				
(a) Canary Island	Chandan Bulchand	Consul	Consulate of India, Triana 35, Las Palmas.	
(b) Barcelona	Gonzalez Perez	Consul General	Consulate General of India, Paseode Sanro Gervagzio 57 Barcellona -22.	
Sudan (Port Sudan)	Shantilal Jadavi Mithane	Consul	Consulate of India, Jadavjee Building, Street No. 11, Port Sudan.	
Sierra Leone	R.D. Rajwani	Consul	Consulate of India, Post Box No. 26, Free Town.	
U.S.A.				
(a) Cleveland (Ohio)	Cod. George P. Bickford	Consul	Consulate of India, 1144 Union Commerce Building, Cleveland (Ohio)	
(b) Hawaii (Honolulu)	Smt G.J. Watumull	Consul	Consulate of India Kaua, Avenue, Honolulu (Hawalii).	
(c) New Orleans	George Denegre	Consul General	Consulate General of India, 225, Baronne Street, New Orleans LA 70112.	
(d) Seattle (Washington)	Frederick J. Orth	Consul	Consulate of India, Clinton, Fleck Glien & Brown, 500, 3rd Lenora Seattle, Washington.	

(e) Houston (Texies)	Dr. H.S. Hayre	Consul	Consulate of India, C/o University of Houston Engineering Deptt. Houston.
Uruguay	Adolf Vegh	Consul General	Consulate of India, Plaza Zaba 324, Montevideo.
Netherlands Antilles	D.B. Nandwani	Consul	Consulate of India C/o, Boolchand, N.V. Heerenstroat 4,B, P.O. Box 35, Curacao.

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

BIBLIOGRAPHY

The bibliography is meant to serve as a guide to further reading on the subjects covered in the volume.

1. THE LAND AND THE PEOPLE

AGARWALA, S.N. — *India's population problems.* Bombay, *Tata McGraw Hill,* 1973.

GOVERNMENT OF INDIA — *Imperial Gazetteer of India.* London, University of Oxford, 1909

INDIA, MINISTRY OF EDUCATION — *National Atlas of India.* New Delhi, the author, 1957

—do— — *Gazetteer of Indian Union.* Vol I. *Country and people,* New Delhi, Publications Division, 1965.

INDIA, REGISTRAR GENERAL AND CENSUS COMMISSIONER — *Census of India* 1971 : *Final population—Series* 1 *Paper* 1 *of* 1972 Delhi, Manager of Publications, 1972

—do— — *Census of India* 1971 : *Religion Series* 1 *Paper* 2 *of* 1972. Delhi, Manager of Publications, 1972.

—do— — *Census of India* 1971 : *Economic characteristics of population. Series* 1 *Paper* 3 *of* 1972. Delhi, Manager of Publication, 1972.

KHANDPUR, SWARN — *India : The land and its people.* Bombay, Ratnabharati, 1971.

MISRA, S.D. — *Rivers of India.* New Delhi, National Book Trust 1970.

MITRA, ASOK — *India's population, : Aspects of quality and control.* 2V. New Delhi; Abhinav Publications, 1978.

SINGH, R.L. — *India : A regional geography.* Varanasi, National Geographical Society of India, 1971.

SPATE, O.H.K. AND LEARMONTH, A.T.A. — *India and Pakistan : A general and regional geography. Ed.* 3. London, Methuen, 1967.

—do— — *India and Pakistan : Land, people and economy. Ed.* 9. London, Methuen 1967.

2. NATIONAL SYMBOLS

INDIA, MINISTRY OF INFORMATION AND BROADCASTING — *Our flag. Rev ed.* New Delhi, Publications Division, 1963.

—do— — *Our national songs. Rev ed.* New Delhi, Publications Division, 1962.

—do— — *Our national emblem.* New Delhi, Publications Division, 1966.

SEN, PRABODHCHANDRA — *India's national anthem.* Calcutta, Santiniketan Asramika Sangha 1949.

3. GOVERNMENT

Constitution

AGGARWALA, R.N. — *National Movement and constitutional development of India. Ed* 9. Delhi, Metropolitan Book Co., 1976.

BANERJEE, ANIL CHANDRA — *Constitutional histroy of India.* 3*V*. Delhi, Machmillan, 1978.

BASU, D.D. — *Commentary on the constitution of India. 5V. Ed.* 5, Calcutta, S. C. Sarkar, 1956-70.

BISWAS, A.R. — *Indian Constitutional and legal histroy.* Calcutta, N.M. Raychowdhury, 1974.

CHHABRA, G.S. — *Indian constitutional system* 1947 *to present day.* Jullundur, New Academic Publishing Co. 1973.

CHITALEY, D.V. AND APPA RAO, S. — *Constitution of India : With exhaustive analytical and critical commentaries.* 5V. *Ed.* 2. Bombay, All India Reporter, 1970.

DIWAN, PARAS — *Indian Constitutional amendments.* New Delhi, Oxford & IBH 1980.

INDIA, MINISTRY OF LAW AND JUSTICE — *Constitution of India (as modified up to* 1 *January,* 1980. Delhi, Manager of Publications, 1980.

JAIN, D.C. — *Parliamentry Previleges under the Indian constitution.* New Delhi, Sterling Publishers, 1975.

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

KAGZI, M.C.J. *Constitution of India.* Delhi. Metropolitan, 1975.

MANSERGH, NICHOLAS *ed.* *Transfer of power* 1942-47. 7*V*. London,, Her Majisty's Stationery Office, 1970—76.

MISHRA, SHREEGOVIND *Constitutional development and national movement in India* (1919 47) Patna, Janki Prakashan, 1978.

SHAKDHER, S.L. *ed.* *Constitution and the Parliament in India.* New Delhi National Pub. House, 1976.

SHIVA RAO, B. *ed.* *Examining India's constitution.* 5*V*. *Bombay*, N.M. Tripathi, 1966—68.

SINGHVI, L.M. *ed* *Fundamental rights and constitutional amendment.* Delhi, National Pub. House, 1971.

VARADACHARI, V.K. *Governor in the Indian Constitution.* New Delhi, Heritage, 1980.

Legislature

CHANDIDAS, R. *ed* *India votes* : *A source book on Indian elections.* Bombay, Popular Prakashan, 1968.

HIDAYATULLAH, M. *Parliamentary privileges* : *The Press and the Judiciary.* Bombay, Asia, 1970.

INDIA, ELECTION COMMISSION *Report on the general elections in India*, 1951-52, 1957, 1962, 1967 1971-72 *and* 1977. Delhi, Manager of Publications.

—do— *Manual of election law.* Delhi, Manager of Publications, 1970.

INDIA, LOK SABHA SECRETARIAT *Rules of procedure and conducts of business in Lok Sabha. Ed.* 6. New Delhi, the author, 1977.

JAIN, R.B. *Indian parliament* : *Innovations, reforms and development.* Calcutta Minerva, 1976.

KASHYAP, SUBHASH C. *ed.* *Elections and electoral reforms in India.* New Delhi, Institute of Constitutional and Parliamentary Studies, 1971.

KAUL, M.N. AND SHAKDHER, S.L. *Practice and procedure of Parliament.* 2*V*. *Ed.* 3. Delhi, Metropolitan Book Co. 1978-79.

RAY, K.C. *Law of elections in India with special reference to defections.* Calcutta, Eastern Law House, 1969.

SHIV LAL *Elections in India* : *Lok Sabha since* 1952. New Delhi, Election Archives, 1978.

SINGHVI, L.M. *ed.* *Parliament and administration in India.* Delhi, Metropolitan Book Co., 1972.

SINGHVI, L.M. *Parliamentary committees in India*, New Delhi, Institute of Constitutional and Parliamentary Studies, 1973.

SRIVASTAVA, G.S. *Law of Indian elections and election petitions. Ed.* 3. Lucknow, Eastern Book Co. 1969.

WEINER, MYRON AND FIELD, JOHN OSCOOD *ed.* *Studies in electoral politics in the Indian States.* 4*V*. Delhi, Manohar Book Service, 1975.

Executive

APPLEBY, P.H. *Public Administration in India* : *Report of a survey.* Delhi, Manager of Publications, 1953.

—do— *Public administration for a welfare state.* Bombay, Asia Publishing House, 1970.

—do— *Re-examination of India's administrative system with special reference to administration of government's industrial and commercial enterprises.* Delhi, Manager of Publications, 1956.

ARORA, R.K. *ed.* *Indian administrative System*, New Delhi, Associated Pub. House. 1978.

AWASTHI, D. *Dawn of modern administration.* New Delhi, S. Chand, 1972.

BATUK SINGH *Union Public Service Commission.* New Delhi, Publications Division, 1974.

BHAMBHARI, C.P. *Public administration in India.* Delhi, Vikas, 1976.

BHARDWAJ, R. K. *Municipal administration in India* : *A sociological analysis of rural and urban India.* New Delhi, Sterling Publishers, 1970.

BHATNAGAR, S. *Rural local government in India.* New Delhi, Light & Life Publishers, 1978.

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

DAYAL, ISHWAR *etc.* *District administration.* Delhi, Macmillan, 1976.
GORWALA, A.D. *Report on public administration.* New Delhi, Planning Commission, 1951.
INDIAN INSTITUTE OF PUBLIC ADMINISTRATION *Organisation of the Government of India. Ed.* 2 Bombay, Sumaya Publications, 1971.
—do— *New vistas in administration.* New Delhi, the author, 1976.
JAGANNADHAM, V. *Administration and social change.* New Delhi, Uppal, 1978.
KHERA, S.S. *District Administration in India.* Bombay, Asia Publishing House, 1964.
MAHESHWARI, S.R. *Indian Administration.* Bombay, Orient Longmans, 1968.
MISRA, B.B. *Administrative history of India,* 1834-1947: *General administration.* Bombay, Oxford University Press, 1970.
PRASAD, BISWANATH *Indian administrative service.* New Delhi, S. Chand, 1969.
SAXENA, A.P. *Training and development in government.* Delhi, Indian Institute of Public Administration, 1974.

4. DEFENCE

BARANWAL, S.P. *Military year book.* New Delhi, Guide Publications, 1978.
—do— *Measures of civil defence in India.* New Delhi, Army Educational Stores, 1969.
CHATURVEDI, M.S. *History of the Indian Air Force.* New Delhi, Vikas, 1978.
DAS, S.T. *Studies in defence strategy.* New Delhi, Sagar Publications, 1978.
HANDA, ROHIT *Policy of India's defence.* New Delhi, Chetna Pub., 1976.
KHERA, S.S. *India's defence problem.* Bombay, Orient Longmans, 1968.
LONGER, V. *Red coats to olive green : A history of Indian army* 1600-1974. Bombay, Allied Publishers, 1974.
MAIKAP, S.C. *Cadet Corps in India: Its evolution and impact.* Calcutta, Naya Prokash, 1979.
MAJUMDAR, B.N. *Study of Indian military history.* New Delhi, Army Educational Stores, 1963.
NAGENDRA SINGH *Theory of force and organisation of defence in Indian constitutional history from earliest times to* 1947. Bombay, Asia Publishing House, 1969.
PANT, G.N. *Studies in Indian weapons and warfare.* New Delhi, Army Educational Stores, 1970.
PRAVAL, K.C. *India's paratroopers.* Delhi, Thomson Press, 1974.
THOMAS, R.G.C. *Defence in India : A budgetary perspective of strategy and politics.* Delhi, Macmillan, 1978.
VENKATESWARAN, A.L. *Defence organisation in India.* New Delhi, Publications Division, 1967.

5. EDUCATION

AGGARWAL, J.C. *Progress of education in free India : Modern Indian education and its problems.* New Delhi, Arya Book Depot, 1977.
AGGARWALA, D. V. AND GURCHARAN SINGH *All India educational directory.* Chandigarh, All India Directories Publishers, 1972.
ASSOCIATION OF INDIAN UNIVERSITIES *Universities handbook India,* 1977. New Delhi, the author, 1978.
BHATT, B.D. AND AGGARWAL, J.C. *ed.* *Educational documents in India* 1813-1968 : *Survey of Indian, education.* New Delhi, Arya Book Depot, 1969.
BISWAS, ARABINDA AND AGGARWAL, SUREN, *ed.* *Indian educational documents since independence : Committees, commissions, conferences.* New Delhi, Academic Publishers, 1971.
BUCH, M.B., *ed.* *Second survey of research in education.* Baroda, Society for Educational Research and Development, 1979.
CHAKRAVARTY, S.R. *Audio Visual aids in education.* New Delhi, Sagar Publications, 1977.
HARPER, A.F. *Research on examinations in India.* New Delhi, NCERT, 1976.

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

HEREDERO, J.M. *Rural development and social change: An experiment in non formal education.* New Delhi, Manohar Book Service, 1977.

INDIA, MINISTRY OF EDUCATION *Education in India : Annual.* Delhi, Manager of Publications.

—do— *Education in the states : Annual.* Delhi, Manager of Publications.

—do— *Education in universities in India : Annual.* New Delhi, the author

—do— *Report of the Secondary Education Commission.* Delhi, the author, 1969.

—do— *Report of the University Education Commission.* 2 V. Delhi, Manager of Publications, 1951.

—do— *Report of the Education Commission* 1964-66 : *Education and National Development.* Delhi Manager of Publications, 1966.

—do— *Report of the Committee on Model Act for Universities.* New Delhi, the author, 1964.

INDIA, MINISTRY OF SCIENTIFIC RESEARCH AND CULTURAL AFFAIR *Report of the Committee on Post-graduate Engneering Education and Research.* New Delhi, the author, 1961.

INSTITUTE OF CONSTITUTIONAL AND PARLIAMENTARY STUDIES *Student unrest : Problems and perspectives.* New Delhi, the author, 1966.

KAUL, J.N. *Higher education in Indua* : 1951-71 : *The decades of planned drift.* Simla, Indian Institute of Advanced Study, 1974.

KOTHARI, D.S. *Education, science and national development.* Bombay, Asia Publishing House, 1970.

MADAN MOHAN *Problems of university education in India.* Meerut, Meenakshi Prakashan, 1972.

MUKERJI, S.N. *Administration of education : Planning and finance,* Vadodara, Acharya Book Depot, 1970.

NATIONAL COUNCIL OF EDUCATIONAL RESEARCH AND TRAINING *Second national survey of secondary education in India.* New Delhi, NCERT, 1969.

RAMANATHAN G. *Quest for general education.* Bombay, Asia Publishing House 1971.

SAIYIDAIN, K.G. *Facets of Indian education.* New Delhi, NCERT, 1971.

SHUKLA, P.D. *Towards the new pattern of education in India.* New Delhi, Sterling, 1976.

SRIVASTAVA, A.P. *Pathology of higher education.* Kanpur, Reprint Publishers, 1979.

THOMAS, T.M. *Indian educational reforms in cultural perspective.* New Delhi S. Chand, 1970.

6. CULTURAL ACTIVITIES

AGARWALA, V.S. *Heritage of Indian art.* New Delhi, Publications Division 1976.

APPASAMY, JAYA *An introduction to modern Indian sculpture.* New Delhi, Vikas 1970.

BANDYOPADHYAYA, S. *Music in India.* Bombay, D.B. Taraporevala, 1970.

BANERJI, P. *Dance of India.* Allahabad, Kitabistan, 1960.

BASHAM, A. L. *ed. Civilizations of monsoon Asia.* New Delhi, S. Chand, 1975.

BAXI, S.J. AND DIVIVEDI, V.P. *Modern museum : Organisation and practice in India.* New Delhi Abhinav Publications, 1973.

BROWN, PERCY *Indian architecture.* 2 V. Bombay, D.B. Taraporevala, 1956

—do— *Indian painting.* Ed. 6. Calcutta, YMCA Publishing House 1963.

CHATTOPADHYAYA, KAMALA DEVI, *Glory of Indian handicrafts.* New Delhi, Indian Book Co. 1976

COOMARASWAMY, A.K. *History of Indian and Indonesian art.* New Delhi, Munshiram Manoharlal, 1972.

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

DEVA, B.C. *Musical instruments of India; Their history and development.* Calcutta, Firma KLM, 1978.

DONGERKERY K.S. *Jewellery and personal adornment in India.* Delhi, Vikas Publications, 1971.

ESPANDE, V.H. *Indian musical traditions.* Bombay Popular Prakashan, 1972.

FERGUSSON, JAMES *History of Indian and eastern architecture.* 2V. New Delhi, Munshiram Manoharlal, 1967.

GARGI, BALWANT *Theatre in India.* New York, Theatre Arts Books, 1962.

GHOSH, N. *Fundamentals of raga and tala with a new system of notation.* Bombay, Popular Prakashan, 1968.

HOLROYDE, PEGGY *Indian music : A vast ocean of promise.* London, George Allen & Unwin, 1972.

INDIA, MINISTRY OF EDUCATION *Gezetter of India : History and culture.* V 2. New Delhi, Publications Division, 1973.

INDIA, MINISTRY OF INFORMATION AND BROADCASTING *Indian handicrafts. Ed* 2. New Delhi, Publications Division 1969.

JONES, W. AND WILLARD, N.A. *Music of India.* Calcutta, Sushil Gupta, 1962.

MATHUR, J.C. *Drama in rural India.* Bombay, Asia Publishing House, 1964

MUNSHI, K.M. *Saga of Indian sculpture.* Bombay, Bharatiya Vidya Bhavan, 1957.

PINGLE, B.A. *History of Indian music.* Calcutta, Sushil Gupta, 1962.

RAGINI DEVI *Dance Dialects of India.* Delhi, Vikas Publications, 1972.

SAMBAMOORTHY, P. *History of Indian music.* Madras, Indian Music Publishing House, 1960.

SHANTI SWARUP *Arts and crafts of India and Pakistan.* Bombay, D. B. Taraporevala, 1970.

SHARMA, B.N. *Festivals of India.* New Delhi, Abhinav, 1978.

SIVARAMAMURTI, C. *Indian painting.* New Delhi, National Book Trust, 1970.

—do— *Sources of history illumined by literature.* New Delhi, Kanak Publications, 1979.

SMITH, V.A. *History of fune arts in India and Ceylon. Ed 3. Bombay,* D.B. Taraporevala, 1962.

STARNNGWAYS, A.H.F. *Music of Hindustan.* London, Oxford University Press, 1965.

SUBBA RAO, T.V. *Studies of Indian music.* Bombay, Asia Publishing House, 1962.

VATSYAYAN, KAPILA *Classical Indian dance in literature and the arts.* New Delhi, Sangeet Natak Academi, 1968.

—do— *Traditions of Indian Folk dance.* New Delhi, Indian Book Co., 1976.

VIDYARTHI, L. P. *Conflict, tension and cultural trends in India.* Calcutta, Punthi Pustak, 1969.

WELLS, H.W. *Classical drama of India : Studies in the values for the literature and theatre of the world.* Bombay, Asia Publishing House 1963.

WINSTEDT, RICHARD *ed. Indian art.* New Delhi, Oxford & IBH Publishing Co., 1969.

7. SCIENTIFIC RESEARCH

BISWAS, A.K. *Science in India.* Calcutta, K.L. Mukhopadhyaya, 1969.

COUNCIL OF SCIENTIFIC AND INDUSTRIAL RESEARCH *Science in India. Ed.* 2. New Delhi, the author, 1966.

INDIA, MINISTRY OF INFORMATION AND BROADCATING *Our research institutions.* New Delhi, Publications Division, 1974.

JAGGI, O.P. *History of science and technology in India.* 5 V. Delhi, Atma Ram & Sons, 1969-72.

JAIN, J.P. *Nuclear India.* 2V. New Delhi, Radiant Publishers, 1974.

MIRCHANANI, G.G. *India's nuclear dilemma.* New Delhi, Popular Book Services, 1969.

MOREHOUSE, W. *Science in India.* Bombay, Popular Prakashan, 1971.

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

PRESS INSTITUTE OF INDIA — *Science and India's future.* Delhi, Vikas Publications, 1969.

RAHMAN, A. AND SHARMA, K.D. *ed.* — *Science policy studies.* Bombay, Somaiya Publications, 1974.

RANDHAWA, M.S. — *Agricultural research in India.* New Delhi, ICAR, 1958.

SARABHAI, VIKRAM — *Science policy and national development.* Bombay, Orient Longmans, 1974.

SATHIANATHAN, M.A. — *Bio-Gas : Achievements and challenges.* New Delhi, Lakshmi, 1976.

SRINIVAS, M.N. — *Science, technology and rural development in India.* Pune, Gokhale Institute of Politics and Economics, 1977.

UKIL, A.C. *ed.* — *History of science in India.* New Delhi, National Institute of Sciences of India, 1963.

8. HEALTH

BANERJI, D. — *Family planning in India.* New Delhi, Peoples' Publishing House, 1978

BURTON, L. E. AND SMITH, H. H. — *Public health and community medicine.* Calcutta, Scientific Book Agency, 1970

CHANDRASEKHAR, S. — *Abortion in a crowded world : The problm of abortion with special reference to India.* London, George Allen & Unwin, 1974

INDIA INTERNATIONAL CENTRE — *National health seminar proceedings* : National seminar on the *role of voluntary agencies in the implementation of public health, medical care and Family planning programmes under five year plans.* New Delhi, the author, 1966.

MEHTA, USHA AND NARDE A. D. — *Health insurance in India and abroad,.* Bombay, Allied Publishers, 1965

PATHAK, SHANKAR — *Social welfare health and family planning in India.* New Delhi Marwah Publications, 1979

RAO, KAMALA GOPAL — *Studies in Family Planning : India,* Delhi, Abhinav Publications, 1974

9. SOCIAL WELFARE

BHATTACHARYA, V. — *Some aspects of social security measures in India.* Delhi Metropolitan Book Co., 1970.

CHATTERJEE, BISHWA B. — *Impact of social legislation on social changes.* Calcutta, Minerva Associates, 1971

CHAUDHARY, PAWAN — *Workers' welfare and law,.* New Delhi, Metropolitan Book Co. 1977

CHOWDHRY, D. P. — *Voluntary social welfare in India.* New Delhi, Sterling Publishers, 1971

CHOWDHURY, S. R. — *Sickness insurance in India and Britain.* Calcutta, World Press, 1966

DUBEY, S. N. — *Administration of social welfare programmes in India.* Bombay Somaiya Publications, 1972

GANDHI, M. K. — *Social Service, work, and reform.* 3 V. Ahmedabad, Navajivan, 1976.

GANGARADE, K. D. — *Dimensions of social work in India.* New Delhi, Marwah, 1973

INDIA, CENTRAL SOCIAL WELFARE BOARD — *Report of the Advisory Committee on After-care Programme,* Delhi, the author, 1955

—do— — *Report of the Advisory Committee on Social and Moral Hygiene.* New Delhi, the author, 1955

INDIA, MINISTRY OF EDUCATION AND SOCIAL WELFARE — *Towarsds equality : Report of the committee on the status of women in India.* New Delhi, the author 1974

INDIA, PLANNING COMMISSION — *Report of the Study Team on Prohibition.* Delhi, Manager of Publications. 1963-64.

—do— — *Social legislation : Its role in social welfare,* New Delhi, Publications Division, 1956

—do— — *Encyclopaedia of social work in India.* 3 V. New Delhi, Publications Division, 1968,

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

KUPPUSWAMY, B. *Social change in India.* Delhi, Vikas Publications. 1972.

PATHAK, SHANKAR *Social welfare, health and family planning in India.* New Delhi, Marwah Publications, 1979

RAO, A.V.R. *Industrial social services in a developing economy.* Bombay, Allied Publishers, 1970

SHARMA, K. M. *Social assistance in Inida.* Delhi, Macmillan, 1976

SRINIVAS, M. N. D. *Social change in modern India.* New Delhi. Orient Longmans, 1972

10. MASS COMMUNICATION

AGARWAL, S. *Press, public opinion and government in India. Jaipur,* Asha Publishing House, 1970.

ALL INDIA, NEWSPAPER EDITOR'S CONFERENCE *What ails the Indian Press.* Bombay, Somaiya Publications, 1971

AWASTHI G. C. *Broadcasting in India.* Bombay, Allied Publishers, 1968.

BANERJEE, SUMANTA *India's monopoly press : A mirror of distortion.* New Delhi, WJ. 1973.

BARNOUW, E. AND KRISHNASWAMY. S. *Indian film.* New York, Columbia University Press, 1963.

BHATTACHARYA, VIVEK *Communication in a global Village.* New Delhi, Chetna, 1976.

CHALAPATHI RAU, M. *Press in India.* Bombay Allied Publishers, 1968

CHATTERJEE, R. K. *Mass Communication.* New Delhi, National Book Trust, 1978.

CHILDREN'S FILM SOCIETY, *Report of the Study Team on the Working of the Children's Film Society vis-a-vis Future of Children's Film Movement in India,* New Delhi, the author, 1968.

DHARAP, B. V. *Indian Film* 1977-78. Pune, Motion Picture Enterprises, 1979

GAUR, MADAN *Other side of the coin : An intimate study of Indian film industry* Bombay, Trimurti Prakashan, 1973

GHOSH, KEDAR *Freedom and fraud of the press.* Calcutta, Rupa and Co., 1973

INDIA, MINISTRY OF INFORMATION AND BROADCASTING *Report of the press Commission.* 3 *Pts.* Delhi, Manager of Publications, 1954.

—do— *Report of the Film Enquiry Committee.* Delhi, Manager of Publications, 1951.

—do— *Report of the Enquiry Committee on Small Newspaper,* 1965, Delhi, Manager of Publications, 1966

—do— *Report of the Committee on News Agencies : August* 1977. New Delhi, Controller of Publications, 1977

—do— *Press in India.* 1977 *Annual Report of the Registrar of Newspaper for India.* 2 *Pts.* Delhi, Manager of Publications, 1978.

—do— *Indian cinema.* 1965, New Delhi, Publications Division. 1965

—do— *Report of the Advisory Committee on the Press Council* 1968. New Delhi, the author, 1969

—do— *Radio and television : Report of the Committee on Broadcasting and Information Media.* New Delhi, the author, 1966

—do— *Report of the Enquiry Committee on Film Censorship.* New Delhi, the author, 1969

—do— *Report of the Evaluation Committee on Plan Publicity by Voluntary Organisations.* New Delhi, the author, 1965

—do— *Report of the Mass Communication Study Team (Sponsored by the Ford Foundation)* New Delhi, the author, 1963.

—do— *Report of the Study Team on Five Year Plan Publicity.* New Delhi, the author, 1965.

—do— *Report of the Fact Finding Committee on Newspaper Economics.* New Delhi, the author, 1975

—do— *Two decades of Films Division.* Bombay, Films Division, 1969

—do— *National Documentation Centre on Mass Communication : Report of the Committee of Experts.* New Delhi, the author, 1975

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

INDIAN NEWS AND FEATURE ALLIANCE — *Press and advertisers year book* 1979. New Delhi, the author, 1979

JAIN, R.D. — *Economic aspects of the film industry in India,*. Delhi, Atma Ram & Sons, 1960

KRISHNAMURTHY, N. — *Indian journalism*. Mysore, Mysore University, 1970.

KUPPUSWAMY, B. — *Communication and social development in India*, New Delhi, Sterling, 1976

LEWIS, JAME — *Active reporter,*. Delhi, Vikas Publications, 1969

LANGAM, T.N.M. — *Circulation problems in Indian newspapers*, Delhi, Press Institute of India, 1968

MAHMOOD, HAMEEDUDDIN — *Kaleidoscope of Indian Cinema.* New Delhi, Affiliated East West Press, 1974

MANKEKAR, D.R. — *Press under pressure.* New Delhi, New Book Co. 1973

MASANI, MEHRA — *Broadcasting and the people.* New Delhi, NBT, 1976

MATHUR, J. C. — *New lamps for Aladdin : Mass media in developing societies.* Bombay, Orient Longmans, 1965.

MENON, N. — *Communication revolution*, New Delhi, NBT, 1976

MINATHUR, JOSEPH — *Freedom of press in India.* The Hague, Martinus Najhoff, 1961

MOTRA, M. — *History of Indian journalism.* Calcutta, National Book Agency, 1969

NARASIMHAN, V. K. — *Press, the public and the administration.* New Delhi, Indian Institute of Public Administration, 1962.

NOORANI, A. G. — *Freedom of the press in India.* Bombay, Nachiketa Publications, 1971

OPERATION RESEARCH GROUP — *National readership survey*, 5V. *Vadodara, the author*, 1972

—do— — *Media scene in India : Highlights from the national readership survey.* Vadodara, the author, 1972

—do— — *Report of the Readership Survey*, 14V. Vadodara, the author, 1973-74.

PARIKH, R. D. — *Press and society*: A *sociological study.* Bombay, Popular Prakashan, 1965

PRESS INSTITUTE OF INDIA — *Press and the law.* New Delhi, the author, 1968

RAMAREDDI, P. — *Cinematograph code.* Hyderabad, Cinematograph Laws Research Institute, 1969

RAY, SATYAJIT — *Our film their films.* Bombay, Orient Longmans, 1976

SARKAR, CHANCHAL — *Press councils and their role.* New Delhi, Press Institute of India, 1965

—do— — *Challenge and stagnations : The Indian mass media.* Delhi, Vikas Publications, 1969

—do— — *Changing press*, Bombay, Popular Prakashan, 1962

SARKAR, KOBITA — *Indian Cinema today : An analysis.* New Delhi, Sterling Publishers, 1975

SAHNI, J. N. — *Truth, about the Indian Press,*. Bombay, Allied Publishers, 1974

SINDHWANI, T. N. — *Newspaper economics and management.* New Delhi, Ankur publishing House, 1979

UMRIGAR, K. D. — *Journalists and the law.* Allahabad, Law Book Co., 1970

—do— — *Mass media in developing countries.* Paris, the author, 1966

UNESCO — *Developing mass media in Asia : Papers of Unesco meeting at Bangkok*, 1960. Paris, the author, 1960

VASUDEV, ARUNA — *Liberty and licence in the Indian Cinema*, New Delhi, Vikas, 1978.

11. ECONOMIC STRUCTURE

AGRAWAL, A. N. — *Indian economy : Nature, problems and progress.* New Delhi, Vikas, 1977

BAUER, P. T. — *Dissent and development : Studies and debates in development economics.* Delhi, Vikas Publishing House, 1973.

BEPIN BEHARI — *Economic growth and technological change in India.* Delhi, Vikas Publishing House, 1974.

CHANDHOK, H. L. — *Wholesale price statistics : India* 1947-78. 2V. New Delhi, Economics & Scientific Research Foundations, 1978.

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

CHARAN SINGH — *India's economic policy : The Gandhian blueprint.* Delhi, Vikas, 1979

CHAUDHURI, PRAMIT *ed.* — *Aspects of Indian economic development.* London, George Allen & Unwin, 1971.

CHAVAN, B. W. AND CHAVAN, ANITA — *National income in India : Concepts and methods.* Bombay, Sindhu Publications, 1970

DAGLI, VADILAL *ed.* — *Infrastructure for Indian economy.* Bombay Vora & Co.

DEULKAL, DURGA — *Development without aid.* Delhi, National Council of Applied Economic Research, 1976

DEWET, K. K. — *Indian economics : A development oriented study. Ed* 2. New Delhi, S. Chand, 1971.

DUTT, R. C. — *Economic history of India.* 2V. New Delhi, Publications Division, 1970.

GADGIL, D. R. — *Planning and economic policy in India.* Pune, Gokhale Institute of Politics and Economics, 1972

GHOSH, A.B. — *Price trends and policies in India.* Delhi, Vikas Publishing House, 1974

GHOSH, ALAK — *Indian economy : Its nature and problems. Ed.* 22. Calcutta World Press, 1979.

INDIA, MINISTRY OE EDUCATION AND SOCIAL WELFARE — *Gazetteer of India, Indian Union.* V. 3. *Economic structure and activities*, New Delhi, the author, 1975.

INDIA, MINISTRY OF FINANCE — *Current economic situation, a review.* New Delhi, the author, 1971.

—do— — *Economic survey*, 1979-80. Delhi, the author, 1980.

INDIA, MINISTRY OE PLANNING — *National account statistics* 1970-71—1977-78. Delhi, the author 1980.

LAKHANI, H.G. — *Problems of economic development of India. Ed.* 4. Bombay, New Literature Publishing Co. 1969.

MATHUR, O.P. — *Public sector banks in India's economy.* New Delhi, Sterling, 1978.

MUKHERJEE, M. — *National income of India : Trends and structure.* Calcutta, Statistical Society of India, 1969.

PRASAD, D.N. — *External resources in economic development of India.* New Delhi, Sterling Publishers, 1972.

RAO, V.K.R.V. AND SEN, S.R. *ed.* — *Papers on national income and allied topics.* 2V. Bombay Asia Publishing House, 1960-62.

SANKARAN, S. — *Economic Development of India.* Bombay, Progressive Publishers 1976.

SINGH, S.K. — *Central excise duties and economic development in India.* New Delhi, S. Chand, 1977.

SREEKANTARADHAYA, B·S. — *Public debt and economic development in India.* New Delhi, Sterling Publishers, 1972.

SWAMY, S. — *Indian economic planning : An alternative approach.* Delhi, Vikas Publishing House, 1971.

TARLOK SINGH — *India's development experience.* Delhi, Macmillan Co. of India, 1974

12. FINANCE

AGARWALA, R.N. — *Financial committees of the Indian parliament.* New Delhi, S. Chand 1966.

BHARGAVA, P.K. — *Essays on Indian public Finances.* Allahabad, Chugh Publications, 1978.

BHATNAGAR, SUDHA — *Union-State financial relations and Finance Commissions.* Allahabad, Chug Publications, 1979.

BOMBWALL, K. R. — *Federal financial relations in India.* Meerut, Meenakshi Prakashan 1970

CHANDA, ASOK — *Aspects of audit control.* Bombay, Vora & Co., 1967.

DESAI, V.R.M. — *Banking development in India.* Bombay, Manaktalas, 1967.

GHATAK, SUBRATA — *Rural money market in India.* Delhi, Macmillan, 1976.

INDIA, CONTROLLER OF INSURANCE — *Indian insurance year book.* Annual. Delhi, Manager of Publications, 1979.

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

INDIA, MINISTRY OE FINANCE — *Economic survey: Annual.* New Delhi, the author

—do— — *Report ot the finance commission,* 1952, 1957, 1961, 1965, 1969, 1973 *and* 1977. Delhi, Controller of Publications.

—do— — *External assistance : Annual.* New Delhi, the author.

—do— — *Report of the Direct Taxes Administration Enquiry Committee.* Delhi, Manager of Publications' 1960.

INSTITUTE OF CONSTITUTIONAL AND PARLIAMENTARY STUDIES. — *Federal financial relations in India.* New Delhi, the author, 1974.

LAL, G.S. — *Financial administration in India.* Delhi, H.P.J. Kapoor, 1969.

MISRA, B.R. — *Indian federal finance. Rev. ed.* 5. Calcutta, Orient Longmans, 1963.

NARENDRA KUMAR — *Bank nationalisation in India : A symposium.* Bombay, Lalvani.

PANANDIKAR, S.G. — *Banking in India. Rev. ed.* 10. Bombay, Orient Longmans, 1963.

PAREEK, H.S — *Financing of small scale industries in a developing economy.* New Delhi, National Publishing House, 1978.

PRABHU, N. SINGH — *Role of development banks in a planned economy.* Delhi, Viksa, 1963.

PREMCHAND, A. — *Control of public expenditure in India. Ed.* 2. Bombay, Allied Publishers, 1970.

RAMA RAU, B. — *Evolution of central banking in India.* Bombay, Vora & Co., 1960.

REDDY, KAIPA NARAYANA — *Growth of public expenditure in India.* 1872-1968 (*A Secular anu time pattern analysis*). New Delhi, Sterling Publishers, 1972.

RESERVE BANK OF INDIA — *Report on currency and finance : Annual.* Bombay, the author

—do— — *History of the Reserve Bank of India* 1935—1951. Bombay, the author, 1970.

—do— — *Trend and progress of banking in India. Annual.* Bombay, the author

SETHURAMAN, T.V. — *Institutional financing of economic development in India.* Delhi Vikas, 1970.

SHAH, MANUBHAI — *New role of Reserve Bank in India's economic development.* Bombay, Vora & Co. 1970.

SINGHVI, L.M. — *Devaluation of the rupee : Its implications and consequences ; Ed.* 2. New Delhi, S. Chand, 1968.

TANNAN, M.L. — *Banking law and practice in India.* Bombay, Thacker and Co., 1972.

13. PLANNING

AHMAD, ENAYAT AND SINGH, D.K. — *Regional planning : With reference to India.* 2 *V.* New Delhi, Oriental, 1980.

BHAGWATI, JAGDISH AND DESAI, PADMA — *Indian Planning for industrialisation.* London, Oxford University Press, 1970

BHATTACHARYYA, K.N. — *Indian plans.* Bombay, Asia Publishing House, 1963.

—do— — *India's fourth plan, test in growthmanship·* Bombay, Asia Publishing House, 1966.

CHATTERJI, AMIYA — *Central financing of state plans in the Indian federation.* Calcutta, K. L. Mukhopadhyay, 1971.

DAS, NABAGOPAL — *Indian economy under planning.* Calcutta, World Press, 1972

GANGIL, D.R. — *Planning and economic policy in India. Ed.* 5 Pune, Gokhale Institute of Politics and Economics, 1972.

INDIA, MINISTRY OF PLANNING — *National accounts statistics* 1970-71—1977-78. New Delhi, the author, 1980.

INDIA, PLANNING COMMISSION — *First five year plan.* New Delhi, the author, 1952.

—do— — *Second five year plan.* New Delhi, the author, 1956.

—do— — *Third five year plan.* New Delh, the author, 1961.

—do— — *Fourth five year plan.* New Delhi, the author, 1970·

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

INDIA, PLANNING COMMISSION — *Fourth five year plan. Resources, outlays and programmes.* New Delhi, the author, 1965.

—do— — *Fourth plan : Mid term appraisal.* New Delhi, the author, 1972.

—do— — *Fifth five year plan* 1974-79. New Delhi, the author, 1976.

—do— — *Draft five year plan* 1978-83. New Delhi, the author, 1978.

IRENGAR, S.K. — *Fifteen years of democratic planning.* 2 V. Bombay, Asia Publishing House, 1965.

MEHTA, ASOKA — *Economic planning in India.* New Delhi, Young India Publications 1970.

MINHAS, B.S. — *Planning and the poor.* New Delhi, S. Chand, 1974.

NATIONAL COUNCIL OF APPLIED ECONOMIC RESEARCH — *Current problems of planned economy.* New Delhi, the author 1962

PARANJAPE, H.K. — *Reorganised planning commission.* New Delhi, Indian Institute of Public Administration, 1970.

14. AGRICULTURE

AGGARWAL, D.G. AND BANSIL, P. C. — *Economic problems of Indian agricuiture.* Delhi, Vikas Publications, 1969.

ALEXANDER, M.N. *ed.* — *Fertilizer statistics* 1978-79. New Delh, Fertiliser Association of India, 1980.

ARORA, R.C. — *Development of agricutlure and allied sectors ; An integrated area approach.* New Delhi, S. Chand, 1976.

BHATIA, B.M. — *India's food proplems and policy since independence.* Bombay Somaiya Publications, 1970.

CHAUDHURI, PRAMIT — *Readings in agricultural development.* London, George Allen & Unwin, 1972.

DAKSHINAMURTI, C. ETC. — *Water resources of India and their utilisation in agriculture.* New Delhi, Water Technology Centre, IARI, 1978.

DASGUPTA, A.K. — *Agricultural and economic development in India.* New Delhi, Associated Publishing House, 1973.

HART, S.C. — *New India's rivers.* Bombay, Orient Longmans, 1956

HUNTER, GUY — *Administration of agricultural development ; Lesson from India.* Bombay, Oxford University Press, 1971.

INDIA, MINISTRY OF AGRICULTURE AND IRRIGATION — *National Commission on Agriculture* 1976 : *Report.* New Delhi, the author, 1977

INDIA, MINISTRY OF FOOD AND AGRICULTURE — *Report of the Grow More Food Enquiry Committee.* New Delhi, the author, 1952.

—do— — *Report of the Foodgrains Enquiry Committee.* New Delhi, the author, 1957.

—do— — *Report of the foodgrains Policy Committee.* New Delhi, the author, 1966.

INDIA, MINISTRY OF INFORMATION AND BROADCASTING — *Irrigation and power in the Fourth Plan.* New Delhi, Publications Division, 1972.

INDIA, MINISTRY OF IRRIGATION & POWER — *Rise in the costs of irrigation and multipurpose projects ; Report of the Expert Committee.* New Delhi, the author, 1973.

INDIAN COUNCIL OF AGRICULTURAL RESEARCH — *Agricultural research in India : Achievements and outlook.* New Delhi, the author, 1972.

—do— — *Handbook of agriculture.* New Delhi, the author, 1977.

JAIN, S.C. — *Agricultural policy in India.* Bombay, Allied Publishers, 1970.

JOSHI, P.C. — *Land reforms in India ; Trends and perspectives.* Bombay, Allied Publishers, 1975.

KALRA, O.P. — *Agricultural policy in India.* Bombay, Popular Prakashan 1971.

KULKARNI, D.G. — *People and agriculture.* Bombay Orient Longmans, 1977.

MEMORIA, C.B. — *Agricultural problems of India. Ed.* 6. Allahabad, Kitab Mahal 1972.

MIRCHANDANI, G.G *ed.* — *Aspects of agriculture in India.* Bombay, Allied Publishers, 1973

NATIONAL COUNCIL OF APPLIED ECONOMIC RESEARCH — *Scientific assessment of flood damages.* New Delhi, the author 1968

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

NATIONAL COUNCIL OF APPLIED ECONOMIC RESEARCH — *Effectiveness of Cooperative Credit for agricultural Production.* New Delhi, the author, 1972.

RAJGOPAL, C. AND JASPAL SINGH — *Adoption of agricultural Innovations.* Delhi, Natonal Publishing House, 1971.

RAMACHANDRAN, L. — *India's food Problem : A new approach.* New Delhi, Allied Publishers, 1977.

RAO, K.L. — *Irrigation.* New Delhi, Publications Division, 1972.

RAY, A. C. — *Co-operative farming in India.* Calcutta, P. Ghosh & Co. 1978.

SEN, SUDHIR — *Reaping the green revolutions : Food and Fobs for all.* New Delhi. McGraw-Hill Publishing Co. 1975.

SHAH, C.H. *ed.* — *Agricultural development of India ; Policy and Problems.* New Delhi, Orient Longman, 1979.

WADHWA, D.F. — *Agrarian legislation in India.* V 1. Bombay, Orient Longmans, 1973

15. RURAL DEVELOPMENT

ARORA, R.C. — *Industry and rural development.* New Delhi, S. Chand, 1978

BHATTACHARYA, S.N. — *Community development ; An analysis of the programme in India.* Calcutta, Academic Publishers, 1970

DEY, S.K. — *Power to the people ; A chronicle of India* 1947-67. Bombay, Orient Longmans, 1969

ENSMINGER, DOUGRAS — *Rural India in transition.* New Delhi, All India Panchayat Parishad, 1972.

GANGRADE, K.D. — *Community organisation in India.* Bombay, Popular Prakashan, 1971.

HARAGOPAL, G. — *Administrative leadership and rural development in India.* New Delhi, Light & Life Publishers, 1980.

INDIA, MINISTRY OF AGRICULTURE & IRRIGATION — *Report of the Committee on Panchayati Raj Institutions.* New Delhi, the author, 1978.

JAIN, NETRA PAL — *Rural reconstruction in India and China : A comparative study.* New Delhi, Sterling Publishers, 1970.

NANAVATI, M.B. AND ANJARIA, J.J. — *Indian rural problem. Bombay,* Indian Society of Agricultural Economics, 1975.

PANCHANADIKAR, K.C. AND PANCHANADIKAR, J. — *Rural modernization in India : A study in developmental infrastructure.* Bombay, Popular, 1978.

PAUL, CHOWDHRY D. — *New partnership in rural development.* New Delhi, M.N. Publishers, 1978.

RAO, R.V. — *Rural industrialisation in India.* Delhi, Concept Pub. Co., 1978.

SHAH, S.M. — *Rural development : Planning and reforms.* New Delhi, Abhinav Publications, 1977.

SRINIVAS, M.N. — *Indian villages. Rev. ed.* 2. Bombay, Asia Publishing House, 1966.

VENKATARAYAPPA, K.N. — *Rural society and social change.* Bombay, Popular Prakashan 1973.

16. CIVIL SUPPLIES AND COOPERATION

CHAUBEY, B.N. — *Principal and practice of cooperative banking in India.* Bombay, Asia Publishing House, 1968.

DHOLAKIA, N. AND KHURANA, R. *ed.* — *Public distribution system.* New Delhi, Oxford & IBH, 1979.

GOYAL, S.K. — *Consumers' cooperative movement in India.* Meerut, Meenakshi Prakashan, 1972.

HOUGH, E.M. — *Cooperative movement in India. Ed.* 5. Bombay, Oxford University Press, 1966.

KRISHNASWAMI, O.R. — *Fundamentals of Cooperation. New Delhi,* S. Chand. 1978.

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

MATHUR, B. K. — *Cooperation in India : A critical analysis of the cooperative movement in India's planned economy.* Agra, Sahitya Bhavan, 1971.

RAO, L.R. — *Rural cooperatives in India.* Delhi, Sultan Chand, 1974.

RESERVE BANK OF INDIA — *Review of the cooperative movement in India.* 1966-68. Bombay, the author, 1970

—do— — *Statistical statements relating to cooperative movement in India : Annual,* Bombay, the author.

SINHA, B.K. — *Cooperatives in India.* New Delhi. National Cooperative Union of India, 1968.

SRIVASTAVA, G.P. — *Traditional forms of cooperation in India.* New Delhi, Indian Cooperative Union, 1962.

SVARDSROM, K.F. — *Agricultural marketing for cooperators.* Calcutta, Allied Publishers, 1969.

17. ENERGY

BASU, S.K. AND MUKHERJEE, S.B. — *Evolution of Damodar canals,* 1959-60. New Delhi, Asia Publishing House, 1963.

CHAUDHURI, M.R. — *Power resources in India.* New Delhi, Oxford & IBH Publishing Co, 1970

DASGUPTA, B. — *Oil industry in India : Some economic aspects.* London, Frank Cass, 1971.

INDIA, MINISTRY OF ENERGY — *Report of the Fuel Policy Committee.* Delhi, Manager of Publication, 1975.

INDIA MINISTRY OF INFORMATION AND BROADCASTING — 25-*years of CWPC* 1945—1970. New Delhi, DAVP, 1970.

—do— — *India : Irrigation and power project problems five year plans.* New Delhi, Publications Division, 1970.

INDIA, MINISTRY OF IRRIGATION AND POWER — *Public electricity supply : All India statistical summary Annual,* New Delhi, the author.

INDIA, MINISTRY OF PETROLEUM AND CHEMICALS — *Indian petroleum and chemicals statistics : Annual.* New Delhi, the author.

KUMARAMANGALAM, S.M. — *Coal industry in India : Nationalization and task ahead.* New Delhi, Oxford, 1973.

MEHTA, BALRAJ — *India and the world oil crisis.* New Delhi, Sterling Publishers, 1974

NATIONAL COUNCIL OF APPLIED ECONOMIC RESEARCH — *Demand of energy in India.* New Delhi, the author, 1966

RANGAPPA, K.S. *ed.* — *Irrigation and power in the three plans.* New Delhi, Publications Division, 1968.

VENKATARAMAN, K. — *Power development in India : Financial aspect.* New Delhi, Wiley Eastern, 1972.

18. INDUSTRY

AGGARWAL, G.C. — *Public Sector steel industry in India.* Allahabad, Chaitanya Pub. House, 1976.

ALEXANDER, P.C. — *Industrial estates in India.* Bombay, Asia Publishing House, 1963

BHARATI, R.K. — *Industrial estates in developing economies.* New Delhi, National Pub. House, 1978.

BIPIN BEHARI — *Rural industrialization in India.* New Delhi, Vikas Publishing House, 1976.

CHAUDHURI, M.R. — *Indian industries : Development and location.* Calcutta, Oxford & IBH Publishing Co., 1970

COUNCIL OF SCIENTIFIC AND INDUSTRIAL RESEARCH — *Wealth of India : A dictionary of Indian raw materials and industrial products.* New Delhi, the author, 1948-73.

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

DAS, NABAGOPAL — *Industrial enterprise in India. Ed.* 4. Bombay, Orient Longmans, 1962

GADGIL, D.R. — *Industrial evolution of India in recent times* 1860-1939. *Ed.* 3. Bombay, Oxford university Press, 1971.

GUPTA, N.S. AND AMARJIT SINGH — *Industrial economy of India.* New Delhi, Light and Life Publishers, 1978.

HAZARI, R.K. — *Monopolies and their regulations in India.* Bombay, Popular, Prakashan, 1967

INDIA, MINISTRY OF INDUSTRIAL DEVELOPMENT — *Report of the Industrial Licensing Policy Enquiry Committee.* Delhi Manager of Publications, 1969

INTERNAL TRADE AND COMPANY AFFAIRS — *Small scale industries.* New Delhi, Development Commissioner, Small Scale Industries, 1971.

—do— — *Report of the Committee on Distriubution of Income and Levels Living.* Delhi, Manager of Publications, 1964

—do— — *Report of the Monopolies Enquiry Commissions.* Delhi, Manager of Publications, 1965.

INDIA, PLANNING COMMISSION — *Programmes of industrial development* 1951-56, 1956-61 *and* 1961-66 Delhi, Manager of Publications.

INDIA, RESERVE BANK OF INDIA — *Foreign collaboration in Indian industries : Second survey report* 1974. Bombay, the author, 1974.

KAUSHAL, O.P. — *Management organisation and control in public enterprises.* Bombay Allied Publishers, 1970.

KHERA, S.S. — *Management and control in public enterprises. Ed.* 2. Bombay, Asia Publishing House, 1972.

KOTHARI — *Kothari's economic and industrial guide of India* 1979-80. Madras Kothari & Sons., 1979.

KUST, M.J. — *Foreign enterprises in India.* Bombay, Oxford University Press 1969.

PANDEY, P.S. — *Impact of industrialization on the rural community.* Delhi, Research Publications, 1978.

RAMANAND RAM, V.V. *ed.* — *Working of the public sector.* Bombay, Allied Publishers, 1970.

SINGHVI, R.L. — *Role of industrial estates in a developing economy.* Bombay, Multi-tech. Pub. Co., 1979.

SINHA, B.N. — *Industrial geography of India.* Calcutta, World Press, 1972.

VAKIL, C.N. *ed.* — *Industrial development of India : Policy and problems.* New Delhi, Orient Longmans, 1973.

VEPA, RAM K. — *Small industry in the seventies.* Delhi, Vikas Publications, 1971.

19. COMMERCE

AGGARWAL, C.P. — *Export methods and services in India. Ed.* 2. Chandausi, India Export Institute, 1972.

BHARDWAJ, R. — *Structural basis of India's foreign trade.* Bombay, Allied Publishers, 1970.

DAGLI, VADILAL — *Commerce year book.* Bombay, Commerce Ltd.

DAGLI, VADILAL *ed.* — *India's foreign trade.* Bombay, Vora & Co., 1973.

DASS, K.K. — *Foreign trade and foreign exchange.* Calcutta, Progressive Publishers 1970

INDIA, MINISTRY OF COMMERCE — *Report of the Study Team on Import and Export Trade Control Organisation.* 2 *V.* New Delhi, the author, 1966

—do— — *Import trade control policy, Annual.* 2 *V.* New Delhi, the author.

INDIAN INSTITUTE OF FOREIGN TRADE — *Seminar of export pricings.* New Delhi, the author, 1970.

—do— — *Trading with the world : Country profiles.* New Delhi, the author. 1972.

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

JAIN, O.P — *Regional cooperation for trade in Asia : Export opportunities for Indian industry and trade.* New Delhi. Commercial Publications Bureau, 1973.

RAO CHATRATHI, P. — *Export marketing in India.* Ahmedabad. Balgovind Prakashan 1970

SHARMA G. D — *Exporting to worlds richest countries.* Delhi, Press and Publication Agency, 1976.

SHOURIE, H.D. — *UNCTAD II : A step forward.* New Delhi, Indian Institute of Foreign Trade, 1969.

VANKATASUBBIAH, M. — *Enterprise and economic change* : 50 *years of FICCI.* New Delhi, Vikas Pub., 1977

WINTER, L.G. AND MEHTA, S.S. — *Export marketing operations.* New Delhi, Indian Institute of Foreign Trade, 1970.

20. TRANSPORT

ACHARYA, RAM — *Civil aviation and tourism administration in India.* New Delhi, National Pub. House, 1978.

AMBA PRASAD — *Indian railways : A study in public utility administration.* Bombay, Asia Publishing House, 1960.

BHATNAGAR, K.P. — *Transport in modern India. Ed.* 8. Kanpur, Kishore Publishing House, 1970.

INDIA, MINISTRY OF RAILWAY — *Indian railways year book* 1978-79. New Delhi, the author, 1979.

INDIA, MINISTRY OF TRANSPORT AND COMMUNICATION — *Report of Intermediate Posts Development Committee.* New Delhi, the author, 1967.

INDIA, PLANNING COMMISSION — *Committee on Transport Policy and Coordination : Final Report,* New Delhi, the author, 1966.

—do— — *Transport requirements in relation to five year plans: Indian experience* 1951-52 *to* 1960-61. New Delhi, the author.

MOOKERJI, R. K. — *Indian shippings : History of the seaborne trade and maritime activities of the Indians from the earliest times. Ed.* 2. New Delhi, Orieng Longmans, 1957

PAVASKAR, M.G. — *Transport.* Bombay, Popular Prakashan, 1978.

RAM, M.S. — *Shipping.* Bombay, Asia Publishing House, 1971.

RAO, M.A. — *Indian Railways.* New Delhi, NBT, 1975.

SAHNI, J.N. — *Indian railways : One hundred years.* 1853-1953. New Delhi, Ministry of Railways, 1953.

SRIDHARAN, K. — *Maritime history of India.* New Delhi, Publications Division, 1965.

21. COMMUNICATIONS

CHATTERJI, USHA etc. — *Stamps and history of the Republic of India.* Paris Oliver, Perin, 1975

CLARKE, GEOGFFREY — *Post office in India and its story.* London, Lane, 1921.

SRIDHARANI, KRISHANLAL — *Story of Indian telegraphs : A century of progress.* New Delhi, Posts and Telegraphs Department, 1953.

22. LABOUR

AGARWAL, S. P. — *Manpower demand : concepts and methodology.* Meerut, Meenakshi Prakashan, 1970.

AGGARWAL, O. P. — *Conditions of employment and disciplinary action against workmen in industrial and commercial establishments and shops.* Delhi Metropolitan, Book Co., 1969.

AHUJA, KANTA — *Idle labour in village India.* New Delhi, Manohar Publications, 1978.

BHIR, B.S. *ed* — *Dimensions of industrial relations in India.* Bombay United Asia Publications, 1970.

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

DAS, NABAGOPAL — *Unemployment and employment planning.* Calcutta, Orient Longman, 1972.

DHAYANI, SHEKHRA NAND — *International Labour Organisation and India in Pursuit of social justice.* New Delhi, National Pub. House, 1977.

FONSECA, A.J. — *Wage determination and organised labour in India.* Bombay, Oxford University Press, 1970.

GIRI, V.V. — *Labour problem in Indian industry.* Bombay, Asia Publishing House, 1965.

INDIA, LABOUR BUREAU — *Indian labour statistics : Annual.* Simla, the author.

—do— — *Indian labour year-book.* Delhi, Controller of Publications.

—do— — *Trade Unions in India* 1966. Delhi, Manager of Publications 1972.

INDIA, MINISTRY OF LABOUR — *Report of the National Commission on Labour.* Delhi, Manager of Publications, 1969.

INDIA, MINISTRY OF LABOUR AND REHABILITATION — *Report of the Joint Workshop on Employment Generation.* New Delhi, the author, 1973.

INDIA, NATIONAL SAMPLE SURVEY ORGANISATION — *Time disposition and wage rate of economically weaker sections of the rural population of India. 3 V.* New Delhi, the author, 1976-77.

INDIA, PLANNING COMMISSION — *Report of the Committee of Experts on Unemployment Estimates,* New Delhi, the author, 1970.

INDIAN LAW INSTITUTE — *Labour law and labour relations.* Bombay, N. M. Tripathi, 1968.

KARNIK, V. B. — *Indian labour problems and prospects.* Calcutta, Minerva Associates, 1974.

—do— — *Indian trade unions : A survey.* Bombay, Popular Prakashan, 1978.

MALIK, P. L. — *Industrial law.* Lucknow, Eastern Book Co., 1971

MAST, M. K. — *Trade union movement in Indian railways.* Meerut, Meenakshi Prakashan, 1969.

RANGREKAR, S. B. — *Employment theory in a labour surplus economy.* Bombay, Popular Prakashan, 1971.

SANJIVAYYA, D. — *Labour problems and industrial development in India.* New Delhi Oxford & IBH Publishing Co., 1970.

SUBRAMANIAN, K. N. — *Wages in India.* New Delhi, Tata McGraw-Hill, 1977.

VAID, K. N. — *Labour welfare in India.* New Delhi, Shri Ram Centre for Industrial Relations, 1970.

23. HOUSING

DESHPANDE, R. S. — *Cheap and healthy homes for the middle classe of India. Ed.* 7 Pune, United Book Corporation, 1969.

INDIA, MINISTRY OF WORKS, HOUSING AND SUPPLY — *Building materials and housing in India : A review.* New Delhi, the author, 1957.

—do— — *Report on Residential Buildings : Committee on Plan Projects,* New Delhi, the author, 1961.

—do— — *Report of the Working Group on Housing and Urban Development in the Third five year Plan.* New Delhi, the author, 1960.

—do— — *Problems of housing in India.* New Delhi, the author, 1967.

—do— — *Report of the Working Group on Housing Cooperation.* New Delhi, the author, 1964.

INDIAN INSTITUTE OF PUBLIC ADMINISTRATION — *Problems of urban housing: Report of a seminar organised by the Indian Institute of Public Administration.* Bombay Popular Book Depot, 1960.

INDIAN NATIONAL BUILDING ORGANISATION — *Benefits of subsidized housing to industrial workers.* Delhi Controller Publications, 1972.

—do— — *Handbook of rural housing and village planning.* Delhi, Manager of Publications, 1968.

—do— — *Selected papers from training course on sociological and economic aspects of housing.* Delhi, Manager of Publications, 1972.

INDIAN STATISTICAL INSTITUTE — *Some results relating to construction of pucca houses in rural and urban areas (required by the National Buildings Organisation) : Twenty-second round, July* 1967-*June* 1968. Delhi, Manager of Publications, 1970.

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

INDIAN STATISTICAL INSTITUTE
Tables with notes on housing condition : *Eighteenth round, Feb.*, 1963-*Jan.*, 1964. Delhi, Manager of Publications, 1970.

JAGMOHAN
Rebuilding Shahjahanabad : *The walled city of Delhi*. Delhi, Vikas Publications, 1975.

MATHUR, OM
Housing : *Standards, costs, designs*. New Delhi, the author, 1970.

NATIONAL COUNCIL OF APPLIED ECONOMIC RESEARCH
Tax incidence on housing. New Delhi, the author, 1963.

SINHA, BAKSHI DAYANATH
Housing growth in India. New Delhi, Arnold-Heineman, 1976.

24. JUSTICE AND THE LAW

CHATURVEDI, R.G.
BAKHSHISH SINGH
Judiciary under constitution. Allahabad, Law Book Co., 1972.

BHATIA, H.S. *ed.*
Supreme Court of India as an Instrument of social justice. New Delhi, Sterling Publishers, 1976.

DHAVAN, RAJEEV
Origin and development of legal and political system in India. 2 *V*. New Delhi, Deep & Deep Publications, 1976.

GLEDHILL, A.
Supreme Court of India: *A socio-legal critique of its juristic technique*. Bombay, N.M. Tripathi, 1977.

HIDAYATULLAH, M.
Republic of India : *The development of its laws and constitution Ed.* 2. Bombay, N.M. Tripathi, 1971.

JHA, CHAKRADHAR
Judicial methods. Delhi, National Publishing House, 1970.

MITTAL, J.K.
Judicial review of legislative acts. Bombay, N. M. Tripathi, 1974.

SITTALWAD, M.C.
Introduction to Indian legal history. Allahabad, Allahabad Law Agency, 1970.
Common law in India. *Ed.* 2. Bombay, N. M. Tripathi, 1970.

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

INDEX

A

Acts, 417
Acts of Parliament, 427-434
Administration, union, 20; district 30
Adoption, law relating to, 419
Adult education, 45, 52, 53
Advertisements (objectionable), 106
Advertising, 138, 161; commercial, 138; Government, 161; objectionable, 106
Advertising and visual publicity, Directorate of, 161
Advocates Act, 1961, 415
Advocate General, 415
Age structure, 9
Aged person, welfare of, 121
Agmark, 222
Agricultural census, 208
Agricultural credit societies, 268
Agricultural co-operative, 271
Agricultural inputs, supply of, 270
Agricultural labour, 395
Agricultural labourers, 382; census, 395
Agricultural Marketing, 222
Agricultural Pump-set Insurance, 200
Agricultural Research, 73, 91
Agricultural Universities, 91, 221

AGRICULTURE, 207-244
Census, 208; Crops, 208; Development programme, 216; Directorate of Marketing and Inspection, 223; Drought prone programme, 221; Dry land development, 221; Expenditure under plan, 211; Farmers' Service Societies, 222; Fertilizers, 219; Foodgrains, 211; High yielding varieties programme, 217; Intensive Agricultural District Programme, 217; Indian Council of Agricultural Research, 224; Irrigated area, 207-208; Land reforms, 224; Land utilisation statistics of, 207; Marketing, 222; National Commission on, 224; Plan protection, 221; Production, 209; Public distribution, 213; Quality seeds, 219; Research and education, 73, 91, 224; Seeds Act, 1966, 220; Soil and Water Conservation, 218

Agro-Industries Corporation, 221
Agro-Service Centres, 221
Ahmedabad Textile Industry's Research Association, Ahmedabad, 91
Air Force, 35; Training Institute, 39
Air Force Administrative College, Coimbatore, 40
Air India, 369
Airports, 369
Akashvani *see* Broadcasting
All India Council of Sports, 60
All India Federation of Co-operative Spinning Mills Ltd., 270
All India Handicrafts Board, 336
All India Institute of Hygiene and Public Health, Calcutta, 93
All India Institute of Medical Sciences, New Delhi, 92
All India Institute of Speech and Hearing, Mysore, 92
All India Radio *see* Broadcasting
Ammonia and Urea plants, 270
Ancient Monuments Archaeological Sites and Remains' Act, 1958, 70
Andaman and Nicobar Islands, 477
Andhra Pradesh, 435
Animal husbandry, 225
Animal health, 228; Cattle development, 225; Dairy and Milk Supply, 224, Fodder development, 226; Piggery development, 227; Poultry development, 226; Sheep development, 227; Slaughter houses, modernisation of, 228; Statistics, 228
Annals of Library Science and Documentation, 90-91
Anthropology Survey of India 96
Applied Nutrition Programme, 108, 252
Apprenticeship training scheme, 399
Archaeology, 70
Archaeology Survey of India, New Delhi, 70
Architecture, 63
Area, India, 1, 6; Andhra Pradesh 435; districts, 436; Assam, 437; districts, 438; Bihar, 438; districts, 440; Gujarat, 441; districts, 443; Haryana, 443; districts, 445; Himachal Pradesh, 445; districts, 446; Jammu and Kashmir, 447; districts, 448; Karnataka, 449; districts, 450; Kerala, 450; districts, 452; Madhya Pradesh, 452; districts, 454; Maharashtra, 455; districts, 457; Manipur, 457; districts, 458; Meghalaya, 459; districts, 460; Nagaland 460; districts, 461; Orissa, 461; districts, 463; Punjab, 464; districts, 465; Rajasthan, 465; districts, 467; Sikkim, 467; districts, 469; Tamil Nadu, 470; districts, 471; Tripura, 471; districts, 471; Uttar Pradesh, 472; districts, 474; West Bengal, 475; districts, 477; *Union territories*, Andaman and Nicobar Islands, 477; districts, 478; Arunachal Pradesh, 478; districts, 479; Chandigarh, 479; Dadra and Nagar Haveli, 480; Delhi, 481; Goa, Daman and Diu, 481; districts, 483; Lakshadweep, 483; Mizoram, 484; Pondicherry, 485; districts, 485
Armed Forces Medical College, Pune, 38
Armoured Corps Centre and Schools, Ahmadnagar, 39
Army Air Transport Support School, Agra, 39
Army Clerks Training School, Aurangabad, 39

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

Army Educational Corps Training College and Centre, Pachmarhi, 39
Army Ordnance Corps School, Jabalpur, 39
Army Service Corps School, Bareilly, 39
Arogya Sandesh, 106
Arunachal Pradesh, 478
Aryabhata, 81
Ashok Mehta, 257
Assam, 437
Assam Rifles, 424
Assam Tea Corporation, West Bengal, 90
Association of State Road Transport Undertaking, 361
Atomic Energy Commission, 78
Attorney General, 415
Audience Programme, 138
Automation, Committee on, 400
Automotive Research Association of India, Pune, 90
Ayurveda, 103, 104
Awards
  Cultural, 521
    Lalit Kala Akademy, 521
    Sahitya Akademy, 521
    Sangeet Natak Akademy, 521
  Distinguished Service, 516
  Film, 154, 522
  Gallantry, 515
  Jawaharlal Nehru, 72
  National Award, 122
  National Safety, 395
  Printing and Designing, 162
  (Dr) Shanti Swaroop Bhatnagar, 87
  Shram Vir, 395

B

Backward area, postal services, 373, 375
Banking
  Advance to priority sector, 191; Co-ordination among Public Sector, 193; Credit authorisation scheme, 190; Deposits, 189; Differential interest rate scheme, 193; Expansion, 187; Export credit, 190; Finance for Agriculture, 192; Foreign branches, 193; Lead Bank Scheme, 189; Nationalisation, 187; Progress of Commercial banking, 188; Regional rural banks, 187; Reserve Bank of India, 193; Resources, use of, 190; rural, 187; small scale industries, 193
Bar Council of India, 415
BASIC ECONOMIC DATA, 167-176
  Central Statistical Organisation, 173
  Consumer prices, 174; index number for industrial worker, 174; Urban Non-manual, employees, 176
  Distribution of factor incomes, 171
  Employment, 171; exchanges, 172; organised sector, 171; private sector, 172; public sector, 172
  Income, national and per capita, 167
  Industries annual Survey, 173
  National products, 168
  National sample survey, 173
  Private consumption, 170
  Public sector performance, 169
  Saving and capital formation, 170
  Wholesale price, Index number, 174, 175
Bauxite, 325
BCG Vaccination Programme, 101
BCG Vaccine Laboratory, Guindy, 106
Beas Project, 238
Beggary, prevention, 120
Bhabha Atomic Research Centre, 78
Bhadra multi-purpose project, 236
Bhakra Nangal project, 238
Bharat Aluminium Company Ltd, 331
Bharat Dynamics Ltd, Hyderabad, 42
Bharat Earthmovers Ltd, Bangalore, 42
Bharat Electronics, Bangalore, 42
Bharat Gold Mines Ltd, 331
Bharat Heavy Electricals Ltd, 321
Bharat Heavy Plates and Vessels Ltd, 320
Bharat Ophthalmic Glass Ltd, 89
Bharat Petroleum Corporation Limited, 292
Bhaskara, 81
Bhima project, 237
Bihar, 438
Biological research *see* National Laboratories
Birla Industrial and Technological Museum, Calcutta, 91
Birth and death rate, 8
Blood Group Reference Centre, Bombay, 92
Bombay Textile Research Association, Bombay, 91
Bonded labour, 385
Bonded Labour System (Abolition) Act, 1976, 385
Bonus, 384
Book Publishing, 66; fair, 67; trade, 67
Border Roads Development Board, 358
Border Roads Organisation, 358
Broadcasting,
  Archives Library, 139; Armed Forces programme, 138; Audience Research Unit, 139; Auxiliary studio centre, 135; Commercial advertising, 138; External Services, 137; Family Welfare programme, 138; Home Service Programme, 135; Indian Broadcasting Service, 134; Music, 136; News Bulletins, 137; News and Current Affairs, 137; Parliament proceedings, commentary on, 137; Plays and Features, 136; Programme Composition, 135; Programme Journals, 140; Radio Sangeet Sammelan, 136; Radio Station, 135; Receiver licences, 134; Research, 95; Rural programme, 138; Satellite, 80, 82; School broadcasting, 139; Sports, 139; Transcription Service, 139, 165;

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

Vadya Vrinda, 136; Vividh Bharati, 135, 138; Youth programme, 139; Yuva Vani, 139
Budget *see under* Finance

C

Cabinet Secretariat, 21
Caltex Oil Refining (India) Limited, 292
Cancer, 93, 102
Cancer Assessment Committee, 102
Cancer Institute, Madras, 93
Cashew Corporation of India, 349
Cattle development, 225
Cement, 314
Cement Corporation of India, 314
Cement Research Institute of India, New Delhi, 90
Census, 5; agricultural, 395; highlights, 14; religion, 10 *see also* Population
Central Advisory Council on Trade, 346
Central Board of Film Censors, 154
Central Board of Forestry, 231
Central Board of Irrigation and Power, 242
Central Building Research Institute, Roorkee, 89
Central Building Research Institute, 403
Central Cottage Industries Corporation of India Ltd, 350
Central Council for Research in Ayurveda and Siddha, 104
Central Council for Research in Homoeopathy, 104
Central Council for Research in Indian Medicine and Homoeopathy, 104
Central Council for Research in Unani Medicine, 104
Central Council for Research in Yoga and Nature Cure, 104-105
Central Drug Research Institute, Lucknow, 88
Central Drugs Laboratory, Calcutta, 105
Central Drugs Standard Control Organisation, Bombay, 105
Central Electricity Authority, 280
Central Electrochemical Research Institute, Karaikudi, 88
Central Electrochemical Research Institute, Madras, 88
Central Electrochemical Research Institute, Mandapam, 88
Central Electronics Engineering Research Institute, Pilani, 87
Central Family Welfare Council, 110
Central Food Laboratories, 109
Central Food Technological Institute, Mysore, 109
Central Food Technological Research Institute, Mysore, 88
Central Fuel Research Institute, Dhanbad, 89
Central Glass and Ceramic Research Institute, Calcutta, 89, 91
Central Government Health Scheme, 102, 103
Central Health Education Bureau, 106
Central Hindi Directorate, 59
Central Indian Medicine Corporation, Ranikhet, 105
Central Industrial Security Force, 425
Central Inland Water Transport Board, New Delhi, 364
Central Inland Water Transport Corporation, 364
Central Institute of English and Foreign Languages, Hyderabad, 59
Central Institute of Fisheries Education, 230
Central Institute of Medicine and Aromatic Plants, Lucknow, 89
Central Jalma Institute for Leprosy, Agra, 92
Central Leather Research Institute, Madras 88
Central Machine Tools Institute, 321
Central Mechanical Engineering Research Institute, Durgapur, 89, 90
Central Mining Research Station, Dhanbad, 89, 90
Central Power Research Institute, 287
Central Public Health and Environmental Engineering Organisation, 109
Central Public Works Department, 403
Central Prohibition Committee, 122
Central Research Institute, Kasauli, 93, 104
Central Reserve Police Force, 424
Central Road Research Institute, New Delhi, 89, 359
Central Salt and Marine Chemicals Research Institute, Bhavnagar, 88
Central Scheme for Environmental Improvement in Slums Area, 407
Central Scientific Instruments Organisation, Chandigarh, 87, 90
Central Sheep Breeding Farm, 227
Central Social Welfare Board, 114
Central Statistical Organisation, 173
Central Warehousing Corporation, 216
Central Water and Power Research Station, Khadakvasla, 95, 242
Central Water Commission, 242
Chambal project, 237
Chandigarh, 479
Chemical Sciences *see* National Laboratories
Chiefs of Staff, 35
Chief Secretary, Andhra Pradesh, 436; Assam, 438; Bihar, 440; Gujarat, 443; Haryana, 444; Himachal Pradesh, 446; Jammu & Kashmir, 448; Karnataka, 450; Kerala, 452; Maharashtra, 457; Manipur, 458; Meghalaya, 460; Nagaland, 461; Orissa, 463; Punjab, 465; Rajasthan, 467; Sikkim, 469; Tamil Nadu, 470; Tripura, 471; Uttar Pradesh, 473; West Bengal, 476; Andaman and Nicobar Islands, 478; Arunachal Pradesh, 479; Delhi, 481; Goa, Daman & Diu, 483; Mizoram, 484; Pondicherry, 485
Child, adoption law, relating to, 419;

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

Marriage, 117, 419
Child Marriage Restraint Act, 1929, 117, 419
Children, 117; Angawadi, 117; foster care, 118; holiday camps, 118; integrated child development, 117; International Year of, 119; Juvenile delinquency, 119; National Policy, 119; Nutrition, 117; Training Programme, 118
Children's Film Festivals, 156
Children's Film Society, 156
Chittaranjan Cancer Research Centre, Calcutta, 93
Christians, 9, 10
Chromite, 326
Citizenship, 18
Cinematographic (Censorship) Act, 1952, 154
Cinematographic film and equipment, 160
Civil aviation, 368; agreements on air transport, 369; air services, 369; airports, international, 368; Directorate General of, 368; flying clubs, 369; research, 96; training centres, 369
Civil Aviation Research and Development, Directorate of, 96
Civil Aviation Training Centre, Allahabad, 369
Civil Defence, 425
Civil Rights Acts, 1955, 123
CIVIL SUPPLIES AND CO-OPERATION, 259-275
Civil Supplies
Approach, 259; Commodities, distribution of, 260; production of, 262; Consumer, articles, 260; co-operative, 260; movements, 265; Cooperation 261; Distribution of, consumer articles, 260; controlled cloth, 261, 275; essential commodities, 260; public distribution system, 260; Essential items, Categories of 259; Fair price shops, 260; Legal measures, 266; Prices, consumer, 262; measures to check inflation, 263-65; wholesale, 262
Production-cum-distribution Scheme, 260
Trade mark, 267; Weight and measures Standards of, 266
Climate, 3
Cloth, distribution of, 261
Coal, 287; bonus 385; energy 387-89; family pension, 391; fuel policy, 276, 288; lignite project, 289; mining 281; nationalisation, 288; for power, 282; production, 287; Provident Fund Deposit Linked Insurance Scheme, 391; washeries, 288
Coal India Ltd, 41
Coal Mines Provident Fund, 391
Code of Criminal Procedure, 1973, 413, 414
Code of Discipline, 386
Coffee, 332; export, 341
Cold Storage Industry, 223
Collected Works of Mahatma Gandhi, 68
College of Combat, Mhow, 38
College of Military Engineering, Kirkee, 38
COMMERCE, 337-351
Coastal trade 351; Direction of trade, 343; Export 337, 338; Coffee, 341; Cotton textiles, 340; direction of, 343; engineering goods, 340; fish, 341; fruit and vegetables, 340; handicrafts, 341; Iron ore and steel, 340; Jute, leather and leather manufactures, 341; oil cakes, 341; principal commodities, 337, 339; principal countries, 343, 344; Public Sector, 306; tea, 340; tobacco, 340; Foreign trade, 337; promotion, 346; value of, 337; Import, 341; direction of, 343; principal commodities, 337, 342; principal countries, 343, 344
Internal trade, 350
Organisations, 346
Pattern of trade, 338; Public sector agencies, 348;
Rail-river borne trade, 350; Trade agreement, 348
Trade policy, 343
Cominco Binani Zinc Ltd, 331
Commemorative postage stamp, 377
Commercial advertising, 138
Commission for scheduled castes and scheduled tribes, 128
Commissioned Ranks, 37
Commodity Boards, 347
COMMUNICATIONS, 373-380
Monitoring Organisation, 380; Overseas Communication services, 379; leased teleprinter channels, 379; press broadcast, 380; transmission, 379
Postal services, 373; backward areas. 373, 375; commemorative stamps, 377; conveyance of mail, 374; exhibitions, 377; foreign, 374; life insurance, 376, 377; number of post offices, letter boxes, 374, 376; Pin Code, 374; Quick Mail Service, 374; rural, 374, 375; Savings bank, 375; statistics, 375
Telegraph services, 378; facsimile service, 378; number of telegraph offices, 377; telex service, 378; teleprinters, 378, 379
Telephone, 378; manufacture of, 379; on demand trunk services, 378; own your telephone scheme, 379; STD services, 378; ship to shore service, 378; Statistics, 378
Wireless planning and co-ordination, 380
Community development *see* Rural Reconstruction
Comptroller and Auditor General, 22
Compulsory Education, 45, 49
Computer *see* Electronics
Computer Maintenance Corporation,

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

Hyderabad, 86
Constituent Assembly, 17
Constitution, 17
Consumer prices index, 262
Contract Labour (Regulation and Abolition) Act, 1970, 385
Co-operation, 261
Agricultural Credit Societies, 268
Consultancy and promotional cell, 274
Co-operatives of, agricultural, 270; Credit Societies, 268; dairy, 272; federations, 274; fishery 272; growth of, 268; housing, 273; industrial, 269; labour, 273; marketing and processing co-operative, 268; movement 268; Poultry, 272; spinning mills, 270; storage, 269; tribal, 272; weaker section, 272
Non-Credit Co-operative Societies, 273
Co-operative Credit Societies Act, 268
Copper Ore, 326
Copyright Act 68
Libraries, 69
Corporate Sector, 194; foreign companies, 198; Government Companies, 198; joint stock companies, 194; liquidation of company, 198
Corps of Military Police Centre and School, Bangalore, 39
Cotton Textiles, export, 340
Council of Scientific and Industrial Research, 75
Council of Scientific and Industrial Research, 86
Counter Insurgency and Jungle Warfare School, 39
Courts 413
Civil, 413
Criminal, 413; procedure reforms, 413; High, 412; jurisdiction of, 413; seats, 413
Subordinate, 412
Supreme, 410; jurisdiction of, 411, 413; membership of, 410; seats, 413
Credit Guarantee Corporation of India Ltd., 189
Crops, 208
Crop Insurance Scheme, 200
CULTURAL ACTIVITIES, 62-72
Agreements of, 71
Archaeology, 70
Archives, 72
Arts performing, 63; visual, 62
Books, 66
Council for, 72
Festivals, 70
International relations of, 72
Libraries, 69
Literature, 65
Museums, 71
Cultural agreements, 71
Currency, 183, 186
Cyclone forecasts, 371

D

Dadasaheb Phalke Award, 157
Dadra and Nagar Haveli, 480
Damodar Valley Project, 240
Dance, 63
Deaf, 121
Death Relief Fund, 391
DEFENCE, 35-44
Air Force, 36, 39; Army, 35; territorial, 43; Commissioned ranks, 37; Expenditure, 37; Ex-servicemen, Welfare of, 43; National Cadet Corps, 43; Navy, 34, 39; Organisations, 35; Production, 40; Public Sector undertakings, 41; Rehabilitation of war victims, 44; Research, 43, 94; Training institutions, 36
Defence Research Development Organisation, 43, 94
Defence Services Staff College, Wellington, 38
Defence Staff College, 38
Delhi, 481
Delhi Development Authority, 402
Delivery of Books and Newspapers (Public Libraries) Act, 1954, 69
Demography *see* Population
Deptt. of Agricultural Research and Education, 91
Department of Science and Technology, 75
Department of Social Welfare, 113
Deposits Insurance Corporation Scheme, 189
Diamond 326
Diesel Locomotive Works, Chittaranjan, 353
Diesel Locomotive Works, Varanasi, 353
Direct Taxes Enquiry Committee, 183
Direct Tax Laws Committee, 183
Directive Principles of State Policy, 19
Directorate General of Civil Aviation, 368
Directorate of Advertising and Visual Publicity, 161-62
Directorate of Evaluation, 166
Directorate of Film Festivals, 157-58
Directorate of Marketing and Inspection, 222
Diseases, 99; Cancer, 102; Goitre, 102; Filaria, 100; Malaria, 99; Smallpox, 100; Trachoma, 101; Tuberculosis, 101; Venereology, 101
Distribution *see* Civil Supplies and Co-operation
District Industries Centre, 335
Dock Labour Welfare of, 393
Doordarshan *see* Television
Dowry Prohibition, of, 115
Dredging Corporation of India, 367
Drought prone area programme, 249
Drugs, 105; acts, 105, 106; advertising, 106; control and manufacture of, 105; prices of, 105
Drugs and Magic Remedies (Objectionable Advertisements) Act, 1955, 105

CC-0. Omnigam Digital Presevation Foundation, Chandigarh

E

EDUCATION, 45—61
Achievements and targets, 47
Adult, 52
Elementary, 49
Enrolment, 49
Expenditure, 48
Five Year Plans, 46, 48-49
Health, 103, 106
Institutions, 51
Literacy 45, 56
Research and Training, 54
National Policy 53
Pattern, 46
Physical, 61
Policy, 45
Rural higher, 54
Scholarships, 54
Secondary, 50
Scheduled Castes and Scheduled Tribes, 132
Sports, 60
University and higher, 50
Vocational and technical, 50
Women's, 53
Workers', 393
Youth Service, 60
Electricity *see under* Energy
Election Commission, 17
Elections, 17
Electrical Industries, 321
Electricity Supply Act, 1948, 280
Electronics, 84-87; commission on, 84
Electronics Corporations of India Ltd., Hyderabad, 79
Electronics Corporation of India Ltd., 85
Electronics Trade and Technology Development Corporation, New Delhi, 85
Elementary Education, 49
E.M.E. School, Vadodara, 39
Emergency Communication Terminal, 83
Employees' Deposit Linked Insurance Scheme, 1976, 390
Employees' Family Pension Scheme, 1971, 391
Employees' Provident Funds, 390
Employees' State Insurance Act, 1948, 390
Employment, 172, 396; apprenticeship scheme, 399; Children's Act, 428; exchanges, 172, 397; Industrial, 385, 400; National Employment Service, 396; Organised Sector, 171; Physically handicapped, 397; Private sector, 171; Public sector, 172, 306; Rural, 252; Vocational guidance, and research, 397, 399, 400; training programme, 398; Unemployment, 171, 172
ENERGY, 276—293
Coal, 287-288; for power, 282; fuel policy, 276, 288; lignite project, 289; mining, 281; production, 287; washeries 288 *see also* Coal
Fuel Policy Committee Report on, 276, 281
Generated, 277-78; region-wise break-up 279
Installed capacity of, 277
Nuclear energy, 282; research, 80
Oil, 282, 289; capacity and production of refineries, 291; Import-Export, 299, refineries, 290; marketing and distribution, 291; multipurpose outlet, 293; new refinery project, 291; transport of, 299
Power, 276-287, act, 280, coal for, 282; consumption pattern of, 283; development, 206; Electricity Boards, regional and states, 281; Five Year Plan, 277; generation programme, 277; geothermal energy for, 283; international co-operation, 285; investment, 279; nuclear energy for, 283; oil and gas for, 282; pattern of development, 279-282; major projects, hydro, 284, 285; thermal and nuclear, 286; regional grids, development of, 280; research, 287; rural, electrification, 283; Solar energy, 283; sources of, 282; tidal energy, 283; training, 281; transmission and distribution 279
Solar energy, 283
Tidal energy, 283
Engineering goods, export, 340
Engineers India Limited, 291
Equal Remuneration Act, 1976, 116
Essential Commodities Act, 1955, 266
Export *see* Commerce
Export Inspection Council, Calcutta, 347
Export Processing Zone, 347
Export Promotion Councils, 347
External Publicity Division, 163

F

Factories Act, 1948, 381
Factories (Amendment) Act, 1976, 116
Fair price shops, 260
Family welfare, 110;
Pension, 391; Planning programme, 110; research, 112; maternal and child care, 111
Farakka project, 239
Farmers Educational Literacy Project, 52
Fauna, 4
Federation of Indian Export Organisations, New Delhi, 346
Fertilizers, 219; Co-operative, 270
Fertilizers and Chemicals Travancore Ltd., 324
Fertilizer Corporation of India, 324
Fertilizers (Planning and Development) India Ltd., 325
Festivals, 70
Field Publicity, Directorate of, 162
Filaria, 100
Film and Television Training Institute of India, 165

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

Film Festivals, Directorate of, 157
Film Finance Corporation, 155-156
Filmotsav, 158
Films, 153
Archives, 158
Awards, 154, 157
Cinema, number of, 155
Documentaries and news reel, 153
Exhibition facilities, 155
Exports, 159
Feature films, 151
International festivals, 157
Silent films, 151
Talkie era, 151
Thematic classification, 152
Films Division, 153
FINANCE, 177—200
Audit, 182
Banking, 187-194
Budget, 179; estimate 1979-80, 183; States and Union territories, 181; Union Govt., 180
Commission, 178
Corporation sector, 194
Currency, 183, 186
Debt Public, 183, 184
Deposit Insurance Corporation, 189
Direct Taxes Enquiry Committee, 184
Insurance, 198
Resources, transfer of, 178
Revenue source, 178
Money supply, 183; with public, 186
Public, 177
Smuggling Measures, 183
Taxation, 182; act, 183; direct, 183; income, 182
Finance Commission, 178
Fisheries, 229; Co-operative 272; development agencies, 230; export, 229, 341; fishing harbours, 229; Inland, 230; Marine, 230; Mechanisation, 229; training, 230
Five year plans *see under* Planning
Flood control, 240; anti-sea erosion, 242; co-operation with other countries, 243, 244; flood control bodies, 240; flood damage, 242; floods of 1979, 241; National flood control programme, 241; organisation, 242; progress, 241; *Rashtriya Barh Ayog*, 241; water and power consultancy service, 243
Flora, 5
Food and Nutrition Board, 215
Food Corporation of India, 90
Food for Work Programme, 254
Foodgrains, 210
Buffer stock, 215
Export, 214
Import, 214
Policy, 212
Price policy, 213
Procurement, 213
Public distribution, 213
Quality control, 215
Rationing, 213
Save grain campaign, 215
Storage, 215
Ford Aerospace Communication Corporation, California, 84
Foreign Exchange Regulation Act, 1973, 267, 301
Foreign trade *see* Commerce
Forest Development Corporations, 232
Forest Research Institute, 233
Forestry, 231; area, 231; Central Board, 231; development, 232; industrial and fuel wood production of, 231; Minor products, 232; National Policy, 231; Research and training, 233; resources survey, 233
Forward Contracts (Regulation) Act, 1952, 267
Forward Markets Commission, 267; committee on, 267
Fruit and vegetables export, 340
Fuel Policy Committee, 276, 288
Fundamental duties, 18; rights, 18

G

Gandak Project, 235
Gandhigram Rural Institute, Madurai, 154
Garden Reach Ship Builders and Engineers, 366
Gazetteers, 69
General Insurance Business (Nationalisation) Act, 1972, 199
Geological Structure, 2
Geological Survey of India, Calcutta, 94, 330
Geology, research, 94
Ghataprabha Valley Development Scheme, 236
Global Atmospheric Research Programme, 83
Goa, Daman and Diu, 481
Goitre, 102
Gold, 326
Government, 17-34
Governor, 17, 30; Andhra Pradesh, 436; Assam, 438; Bihar, 440; Gujarat, 442; Haryana, 444; Himachal Pradesh, 446; Jammu and Kashmir, 448, Karnataka, 449; Kerala, 451; Madhya Pradesh, 453, Maharashtra, 456; Manipur, 458; Meghalaya, 459; Nagaland, 460; Orissa, 463; Punjab, 465; Rajasthan, 466; Sikkim, 468; Tamil Nadu, 470; Tripura, 471; Uttar Pradesh, 473; West Bengal, 476
Grameen Mahila Sangh, 118
Guardian and Wards Act, 1890, 419, 420
Guardianship, 419
Gujarat, 441
Gypsum, 326

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

H

Haffkins Institute, Bombay, 93, 106
Hamara Desh, 151
Handicapped, Welfare of 120, deaf, 121; mentally, 121; national awards, 122; orthopaedically, 121; physically, 120; scholarships, 121
Handicrafts, 63, 347
Handicrafts and Handlooms Export Corporations, 347
Haryana, 443
HEALTH, 98—112
  Disease, 99
  Drugs control and manufacture, 105
  Education, 103, 106
  Family Welfare, 110
  Five Year Plans, 98
  Food adulteration, 108
  Hospitals, 102
  Nutrition, 108
  Objectives, 98
  Research, 104
  Target and achievements, 98
  Water supply and sanitation, 109
Heavy Engineering Corporation Ltd., 320
Heavy Machine Tools Plant, 321
High Altitude Warfare School, 39
High Court *see* Justice and the law *see also* Court
Highway Research Board, 359
Himachal Pradesh, 445
Hindi, development of, 59
Hindu Adoption and Maintenance Act, 1956, 419
Hindu Adoption and Maintenance Act, 1956, 421
Hindu Law of Succession, Act, 1956, 422
Hindu Marriage Act, 1955, 116, 417
Hindustan Aeronautics Ltd., 41, 80
Hindustan Antibiotics Ltd., 322
Hindustan Cables Ltd., 321
Hindustan Copper Ltd., 324, 331
Hindustan Fertilizer Corporation, 324
Hindustan Insecticides Ltd., 323
Hindustan Machine Tools Ltd., 321
Hindustan Organic Chemicals Ltd., 323
Hindustan Paper Corporation, 314
Hindustan Petroleum Corporation, 292
Hindustan Photo Films Manufacturing Company, 315
Hindustan Prefab Ltd., 403
Hindustan Shipyard, 366
Hindustan Teleprinters Ltd., 378
Hindustan Zinc Ltd., 331
Hirakud Dam, 237
Home Guards and Civil Defence, 425
Homoeopathic Pharmacopoeia Committee, 104
Homoeopathy, 104
Hospitals, 102
Hotels, 371
HOUSING, 401—408
  Central Sector Scheme, 404
  Construction agencies, 403
  Finance, 402
  House sites for landless workers, 405
  Integrated development of small and medium towns, 407
  Investment, 402
  Jhuggi and Jhonpri Removal Scheme, 408
  Land acquisition scheme in Delhi, 408
  Mass rapid and transit system, 406
  Metropolitan cities, development of, 407
  National Capital Region, 406
  Production of materials, 403
  Research, 402
  Slum clearance and improvement scheme, 407
  Slums, environmental improvement of, 407
  State sector scheme, 404
  Town and country planning organisation, 405
  Urban Art Commission, 407
Hydro-electric power, sources of, 282

I

Ilmenite, 326
Import *see* Commerce
Import Policy for 1979-80, 334
Import Policy of village and small scale industry, 334
Income, national and per capita, 167; average annual earning in factories, 383
Income Tax, 182
India International Stamp Exhibition, 377
India Tourism Development Corporation, 371
Indian Air Force, 36
Indian Air Lines, 369
Indian Bureau of Mines, 330
Indian Cancer Research Centre, Bombay, 93
Indian Christian Marriage Act, 1872, 418
Indian Council for Cultural Relations, New Delhi, 72
Indian Council of Agricultural Research, 91, 224
Indian Council of Arbitration, New Delhi, 347
Indian Council of Historical Research, New Delhi, 55
Indian Council of Medical Research, New Delhi, 92
Indian Council of Social Science Research, 55
Indian Drugs and Pharmaceuticals Ltd., 322
Indian Divorce Act, 1869, 418
Indian Farmers' and Fertilizer Cooperative, 270, 324
Indian Grain Storage Institute, 215
Indian Institute of Advanced Study, Simla, 55
Indian Institute of Astrophysics, Bangalore, 95

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

Indian Institute of Experimental Medicine, Calcutta, 88
Indian Institute of Foreign Trade, New Delhi, 347
Indian Institute of Forest Management, 233
Indian Institute of Geomagnetism, Bombay, 95
Indian Institute of Legal Metrology, Ranchi, 266
Indian Institute of Mass Communication, 165-66
Indian Institute of Packaging, Bombay, 347
Indian Institute of Petroleum, Dehra Dun, 88
Indian Institute of Technology, 51
Indian Institute of Tropical Meteorology, Pune, 95
Indian Jails Committee, 426
Indian Jute Industries' Research Association, Calcutta, 91
Indian Lighthouse Act, 1927, 367
Indian Literature, 65
Indian Meteorological Department, 95
Indian Military Academy, Dehra Dun, 38
Indian Motion Picture Export Corporation, 159
Indian National Philatelic Exhibition, 377
Indian National Satellite System, 83
Indian National Scientific Documentation Centre, New Delhi, 90
Indian National Shipowners' Association, 364
Indian Oil Blending Limited, 291
Indian Oil Corporation, 292
Indian Petro-chemicals Corporation Ltd., 323
Indian Plywood Industries Research Institute, Bangalore, 89
Indian Registry of Pathology, New Delhi, 92
Indian Roads Congress, New Delhi, 359
Indian Science Abstract, 91
Indian Space Research Organisation, 80
Indian Standards Institution, 299
Indian Telephone Industries Ltd., 379
Indo-Bangladesh Joint River Commission, 244
Indo-Burma Petroleum Company Limited, 292
Indus Commission, 243
Industrial Co-operatives, 269
Industrial Credit and Investment Corporation of India, 300
Industrial Development Bank of India, 299
Industrial Disputes Act, 1947, 385
Industrial Disputes (Amendment) Act, 1976, 388
Industrial Electronics Promotion Programme, 85
Industrial Employment (Standing Orders) Act, 1946, 385
Industrial Finance Corporation of India, 299
Industrial Licencing, 296
Industrial Licencing Policy Enquiry Committee, 296
Industrial Policy, 295
Industrial Production, 206
Industrial Reconstruction Corporation of India, 300
Industrial relations, 385; code of discipline, 385, 386; grievance procedure, 387; industrial employment standing orders, 385; industrial truce, 385, 386; National Arbitration Promotion Board, 387; works committee on, 387
Industrial Toxicology Research Centre, Lucknow, 89
Industrial Training Institute, 398
Industries (Development and Regulation) Act, 1951, 296
Industries, Khadi & village, 253
Industries, rural, 253
INDUSTRY, 294-336
  Annual Survey, 294
  Development under plans, 301-305
  Finance, institutional, 299
  Foreign capital, 301
  Licencing, 296; liberalisation, 298
  Principal industries, 308
    Automobiles, 322
    Cement, 314
    Chemicals, 322
    Cotton Textiles, 308
    Drugs and Pharmaceuticals, 322
    Electrical, 321
    Engineering, 319; export of, 320
    Fertilizers, 323
    Handicraft, 336
    Handlooms and Powerlooms, 336
    Instruments, 321
    Iron and Steel, 340
    Jute, 308
    Mining and minerals, 325
    Machine tools, 321
    Paper, 314; newsprint, 314
    Plantation, 332; cardamom, 332; Coffee, 332; rubber, 332; tea, 332
    Petro-chemicals, 323
    Photo paper and films, 315
    Sugar, 313
    Vanaspati, 313
    Policy and progress, 294
    Production, 306, 307; in selected industries, 309; Index of, 307, 312
    Public Sector, 305; employment, 306; export of, 306; investment sectorwise, 305; 307; organisation, 329; profit, 306; resources, 306
    Regulations, 296
    Social Security, 389
    Standardisation, 299
    Workers' participation, 387
Infantry School, Mhow and Belgaum, 39
Information Centres, 150; Sciences, 90
Information System for Science, 76
Inland Waterways *see* Waterways,

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

Inland
Institute for Research in Reproduction, Bombay, 92
Institute of Aviation Medicine, Bangalore, 97
Institute of Criminology and Forensic Sciences, 425
Institute of Defence Management, Secunderabad, 39
Instrumentation Ltd., 322
Insurance, 198; business, 198; cattle, 200; crop, 200; employees state, 390; general, 199; investment, Policy of, 199; Janta Policy, 200; Life, 199; Postal life, 376
Integral Coach Factory, Perambur, 354
Integrated Development of Small and Medium Towns, 408
Integrated Rural Development, 250
Integrated Subsidised Housing Scheme, 404
Intelligence Bureau, 423
Intelligence Training School and Depot, Pune, 39
International Airports Authority of India, 368
International Commission on Communication Problems, 166
International Competitive Childrens' Film Festivals, 156
International Cultural relations, 71
International year of the child, 119
Iron and Steel, 348, export, 340
Iron ore, 326, export, 340
Irrigation, 233-244
Anti-sea erosion, 242
Area, 206, 208, 233
Assistance to foreign countries, 243
Flood control, 240
International agreements, 243
Investment during plans, 241
Major and Medium projects, 234
Minor programme of, 248
Multipurpose projects, 235
Organisations, 242
Potential, 233
Rashtriya Barh Ayog, 241
Water and Power Consultancy service, 243
IUD Insertions, 111

J

Jains, 11
Jammu & Kashmir, 447
Jana—Gana—Mana 15
Janta Personal Accident Insurance Policy, 200
Jawahar Lal Nehru Award, 72
Jayakwade Project, 237
Jhuggi and Jhonpri Removal Scheme, 408
Journalists, Working Act, of, 391
JUSTICE AND THE LAW, 409-434
Judicial districts, 410
Judiciary, 410; advocate general, 415; Civil Court, 413
Criminal Court, 413; High Court, 412; legal profession, 415
Separation from executive, 410
Supreme Court, 410
Law commission, 416
Laws of Parliament, 427
Legal aid to poor, 422
Personal law, 417; adoption 419; guardianship, 419; maintenance, 420; marriage law, 417; succession law, 421
Police, 423; commission on, 425
Prison, 426
Sources of law, 409
Subordinate legislation, 409
Jute, 313; export, 340
Jute Corporation of India, 313, 340

K

Kakrapara project, 236
Kangrabati project, 240
Karnataka, 449
Kendriya Hindi Sansthan, Agra, 59
Kerala, 450
Khadi *see* Industry
Khadi and Village Industries Commission, 253
Kosi project, 235

L

LABOUR, 381—400
Agricultural, 395
Automation Committee on, 400
Bonded labour, 385
Bonus, 384
Conciliation and adjudication, 388
Contract labour, 385
Employment, 396
Industrial relations, 385; Code of discipline, 385, 386; grievance procedure, 387; Industrial Employment Standing orders, 385; industrial truce, 385, 386; National Arbitration Promotion Board, 387; works committee on, 387
Lay-off and retrenchment, 388
National Commission on, 388
National Labour Institute, 389
National safety awards, 394
National Safety Council, 393
Rural labour enquiry, 396
Social Security, 389
Trade Union, 389
Training Programme, 398
Vocational guidance 397; Programme for women 399; research, 400

 CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

Wages and earning, 384; occupational survey, 385; regulation of, 384, welfare of, 392
Workers education, 393; participation, 387; representation in management, 388
Safety, 394; wages and earning, 384
Working conditions, 381
Working Journalist Act, 391
Workmen's Compensation Act, 392
Lakshadweep, 483
Lal Bahadur Shastri Nautical and Engineering College, Bombay, 365
Lalit Kala Akademi, 63
Land Acquisition and Development Scheme, 404
LAND AND THE PEOPLE, 1—14
Age structure and sex ratio, 9; Birth and death rate, 8; climate, 3
Demographic background, 6; Fauna & Flora, 4; Geological Structure, 2; Physical background, 1; Religions, 9, 10; River System, 2; Social Pattern, 9
Land reforms, 224; abolition of intermediary tenures, 225; ceiling on land holdings, 225; consolidation of holdings, 225; objectives, 224; programmes of action, 225; security of tenures, 225
Land Utilisation, Statistics of, 207
Languages 11; Act 22; development, 59; official, 22
Large Industrial House, 296-297
Large Scale Acquisition, Development and Disposal of land, Delhi, 408
Law Commission, 416
Laws of Parliament, 425
Lead Zinc Ore, 326
Legislature, 17, 22, 29; Members, 503, 503
Leprosy, 100
Libraries, 69; Copyright, 69; manuscript, 69
Life Insurance Corporation of India, 198
Literacy, 45, 54; 56-58
Lok Sabha, 23; allocation of seats, 25; Members of, 503
Low Income Group Housing Scheme, 404
Lubrizol India Limited, 291

M

Madhya Pradesh, 452
Madras Fertilizers Ltd., 324
Mahanadi delta irrigation scheme, 238
Maharashtra, 455
Mahi project, 236
Malaprabha project, 237
Malaria, 99
Manganese ore, 326
Manipur, 457
Marginal Farmers and Agricultural Labourers, 246
Marine Products Export Development Authority, 347
Marketing Planning and Design Centre, 256
Marriage Laws Amendment Act, 1976, 116
Marriage Laws (Amendment) Act, 1976, 418
MASS COMMUNICATION, 134-166
Advertising and visual publicity, Directorate of, 161; Broadcasting, 134, 140; Central Board of film censors, 154; Children's Film Society, 156; External Publicity, 163; Evaluation, Directorate of, 166; Field publicity, Directorate of, 162; Film Festivals, Directorate of, 157; Films, 151-160; Films Division, 153; Film Finance Corporation, 155 Indian Motion Picture Export Corporation, 159; International Commission on communication problems, 166; National Documentation Centre on Mass Communication, 164
News agencies, 151
Non-Aligned News Agencies Pool, 151; Photo Division, 163; Press Commission, 149; Press Council of India, 148; Press Information Bureau, 149; Publications Division, 160; Research and Reference Division, 164; Song and Drama Division, 163; Television, 140
Training, 164; Working Journalist Act, 391
Mass Rapid Transit System, 406
Maternal and Child health care, 111
Maternity Benefit Act, 1961, 116; 392
Mayurakshi project, 239
Mazagaon Dock, 366
Medical, 92; colleges, 103, 107; education, 103; institutes, 5; stores organisation, 92-94; research, 92. 104, 107
Medicinal and Aromatic Plants Abstracts, 91
Meghalaya, 459
Mentally retarded, 121
Meteorology, 95, 371; cyclone forecasts, 371; exchange data of, 372, research, 95; tourists, 372
Metallurgical and Engineering Consultants (India) Ltd., 319
Mica, 326
Mica Trading Corporation of India Ltd., Patna, 350
Mid-day Meal Programme, 108
Middle Income Group Housing Scheme, 404
Military College of Electronics and Mechanical Engineering, Secunderabad, 39
Military College of Telecommunication, Mhow, 39
Minerals, 325; air-borne surveys, 327; organisation for mapping and explo-

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

ration 329; production of, 327; refractories, 327, resources, 325
Mineral Exploration Corporation, 330
Minerals and Metals Trading Corporation, 349
Mines Act, 1952, 394
Minimum Wages Act, 1948, 384
Mining *see also* minerals,
Mining and Allied Machinery Corporation, 320
Mishra Dhatu Nigam Ltd., Hyderabad, 42
Mizoram, 484
Modern Bakeries (India) Ltd., 108
Mogul Line Ltd., 365
Monopolies and Restrictive Trade Practices Commission, 296
Monsoons experiment, 83
Motor transport workers, welfare of, 393
Motor Transport Workers Act, 1961, 393
Motor Vehicles, number of, 360; types of, 362
Museums, 71, 91
Muslim law of succession, 422
Muslims, Personal law relating to *see* Justice and the law

N

Nagaland, 460
Nagarjunsagar project, 235
National Academy of Music, Dance and Drama, 64
National Adult Education Programme, 52
National Aeronautical Laboratory, Bangalore, 89
National Agricultural Co-operative Marketing Federation, 271
National Anthem, 15
National Arbitration Promotion Board, 387
National Archives of India, New Delhi, 71
National Awards for handicapped, 122
National Bibliography of Indian Literature, 65
National Bird, 4
National Board of Adult Education, 52
National Book Development Board, 66
National Botanical Research Institute, Lucknow, 88
National Building Construction Corporation, New Delhi, 403
National Buildings Organisation, 402
National Cadet Corps, 43
National Calendar, 16
National Capital Region Plan, 406
National Centre for Software Development and Computing Techniques, Bombay, 85
National Centre for the Blind, Dehra Dun, 120
National Chemical Laboratory, Pune, 88
National Commission on Agriculture, 224
National Commission on Labour, 388
National Committee on Environmental Planning and Co-ordination, 77
National Committee on Science and Technology, 74
National Co-operative Consumers Federation, 260-1
National Co-operative Development Corporation, 269
National Co-operative Union of India, 273
National Council for Rural Higher Education, 54
National Council for Training in Vocational Trades, 50
National Council of Educational Research and Training, 54
National Defence Academy, Khadakvasala, 37
National Defence College, New Delhi, 38
National Documentation Centre on Mass Communication, 164
National Environmental Engineering Research Institute, Nagpur, 89
National Federation of Co-operative Sugar Factories, 269
National Federation of Dairy Co-operatives, 272
National Federation of Industrial Co-operatives, 270
National Fertilizers Ltd., 324
National Filaria Control Programme, 100
National Film Archive of India, 158-59
National Flag, 15
National Flood Control Programme, 241
National Forest Policy, 231
National Gallery of Modern Art, 63
National Geophysical Research Institute, Hyderabad, 88
National Goitre Control Programme, 102
National Harbour Board, 367
National Heavy Engineering Co-operative Ltd., 269
National Highways, 358
National Income, 167
National Industrial Development Corporation, 300
National Information System for Science and Technology, 76
National Institute of Ayurveda, Jaipur, 104
National Institute of Cholera and Enteric Diseases, Calcutta, 92
National Institute of Communicable Diseases, Delhi, 93
National Institute of Design, Ahmedabad, 63
National Institute of Education, New Delhi, 55
National Institute of Nutrition, Hyderabad, 92, 107

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

National Institute of Oceanography, Panaji, 88
National Institute of Occupational Health, Ahmedabad, 92
National Institute of Public Co-operation, 118
National Institute of Rural Development, Hyderabad, 257
National Institute of Social Defence, 120
National Institute of Virology, Pune, 92
National Instruments Ltd., 322
National Laboratories, 87; biological, 88; chemical, 88; engineering, 89; fiber technology, 91; information sciences, 90; physical and earth sciences, 87
National Labour Institute, 389
National Leprosy Control Programme, 100
National Malaria Eradication Programme, 99
National Metallurgical Laboratory, Jamshedpur, 89
National Mineral Development Corporation Ltd., 330
National Newsprint and Paper Mills, 314
National Organic Chemicals Ltd., 323
National Permit Schemes, 360
National Physical Efficiency Drive, 61
National Physical Laboratory, New Delhi, 87, 267
National Police Commission, 425
National Radar Council, 84
National Remote Sensing Agency, 76
National Research Development Corporation, 75, 87
National Research Development Corporation of India, New Delhi, 78
National Safety Council, 394
National Sample Survey, 173
National Scheme of Training of Rural Youth for Self-Employment, 253
National School of Drama, New Delhi, 65
National Seeds Corporation, 219
National Service Scheme, 60
National Shipping Board, 364
National Small Industries Corporation, 335
National Smallpox Eradication Programme, 100
National Song, 16
National Sports Organisation, 61
NATIONAL SYMBOLS, 15-16
  Anthem, 15
  Calendar, 16
  Emblem (State), 15
  Flag, 15
  Song, 16
National Thermal Power Corporation, 281
National Trachoma Control Programme, 101
National Tuberculosis Institute, Bangalore, 93
National Vocational Training Institute for Women, 400
National Water Supply and Sanitation Programme, 109
Nationalisation of road transport, 360
Nature Cure Advisory Committee, 104
Naval Air Station, Garuda, 39
Naval Training Establishment, 39
Navy, 35; Training Establishment, 39
Nehru Yuvak Kendra, 60, 61
New Energy Sources, 75
News Agencies, 150, 151
Newspaper *see also* Press
Neyveli Lignite Corporation, 324
Nickel Ore, 326
Nirodh, 111
Non-Aligned News Agencies Pool, 151
Nuclear Energy Power, 276, 282; research, 80
Nurses training, 107
Nutrition, 108
Nyaya Panchayats, 259

O

Officers' Training School, Madras, 38
Official Language *see* Language
Oil, 326; export and import, 283 *see also* Petroleum
Oil and Natural Gas Commission, 289
Oil India Limited, 290
Oral pills, 111
Ordnance factories, 41
Orissa, 461
Overseas Communication, 379

P

Painting, 62
Panchayati Raj *see also* Rural Reconstruction
Panchayats, 256
Parambikalam Aliyar Project, 239
Parliament *see also* Union of India
Parliamentary Committees, 24
Parsis Marriage and Divorce Act, 1936, 419, 421
Payment of Bonus Act, 1965, 384
Payment of Gratuity Act, 1972, 390
Per capita income *see* income
Petroleum, 289, 326; energy, 276, 282; exploration, 290; Oil and Natural Gas Commission, 289; refineries, 290; New refinery project, 291; marketing and distribution, 291; Import, 293; distribution centres, increase in prices, 276
Pharmacopoeia Laboratory for Indian Medicine, Ghaziabad, 105
Philately exhibitions, 377 *see also* Communications
Photo Division, 163
Physical Research Laboratory, Ahmeda-

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

bad, 84
Physically handicapped, welfare of, 120
PLANNING, 201-20
Achievements, 203
Agriculture production, index of 206
Commission, 201
Education, 206;
Expenditure, progress of, 204
Five Year Plans, 201-203;
achievements, 204, 207
objectives, 201; Industrial production, 206
Irrigated area, 206
Objectives, 201
Power generating capacity, 206;
Public sector outlay and investment, 203
Plantation Labour Act, 1951, 393
Plantation Labour, welfare of, 393
Pochampad project, 235
Police, 423; Assam Rifles, 424; Border Security Force, 424; Central Bureau of Investigation, 423; Central Reserve Force, 424
Commission on 425; Criminology Institute of, 425
Home Guards and Civil Defence, 425
Intelligence Bureau, 423; training institute of, 425
Pondicherry, 485
Population, 6; age and structure, 9; background, 5; Backward classes, 124; birth and death rate, 8; density, 6; growth of, 7; life expectancy, 8; religion, 10; rural & urban, 11; sex ratio, 9; workers and non-workers, 171; working, 381
STATES AND UNION TERRITORIES, 435—485
Andhra Pradesh 435; district, 436; Assam, 437; district, 438; Bihar, 438; district, 440; Gujarat, 441; district 443; Haryana, 443; district, 445; Himachal Pradesh, 445; district, 446; Jammu & Kashmir, 447; district, 448; Karnatak, 449; district, 450; Kerala, 450; district, 452; Madhya Pradesh, 452; district, 454; Maharashtra, 455; district, 457; Manipur, 457; district, 458; Meghalya, 459; district, 460; Nagaland, 460; district, 461; Orissa, 461; district, 463; Punjab, 464; district, 465; Rajasthan, 465; district, 467; Sikkim, 467 district, 469; Tamil Nadu, 469; district, 470; Tripura, 471; district, 471; Uttar Pradesh, 472; district, 474; West Bangal, 475; district 477; Andaman and Nicobar Islands, 477; district 478; Arunachal Pradesh, 478; district, 479; Chandigarh, 479; Dadra and Nagar Haveli, 480; Delhi, 481; Goa, Daman Diu, 481; district, 483; Lakshadweep, 483; Mizoram, 484; Pondicherry, 485; district, 485
Posts and Telegraphs Board, 373
Post-Graduate Institute of Medical Education and Research, Chandigarh, 92
Post-Partum Programme, 112
Postal Index Number Code, 375
Postal Services, *see under* Communications
Poultry Co-operatives, 272
Power *see* Energy
Power research, 95
Praga Tools, Hyderabad, 42
Press, 143-151
Central Press Accreditation Committee, 150;
Circulation of Newspapers, 145; language-wise, 145;
Commission on, 149;
Council, 148
News agencies, 151
Newspapers, number of, 143
Newsprint, 148; Advisory Committee on, 148
Ownership pattern, 146, 148
Press Commission, 149
Press Council, 148
Press Information Bureau, 149;
Accreditation facilities, 150;
Information centres, 150; photo service, 150
News and features agencies Accredited, 150
UNESCO Features, 150; Wall Newspaper, 151
President, 19, 499
Prevention of Food Adulteration Act, 1954, 108
Price Policy, Agriculture, 213
Prices, 174
Consumer price index, 174, 262
Wholesale price index, 175, 262
Primary Health Centre, 103
Prime Minister, 17, 499
Prime Minister's National Relief Fund, 133
Prisons, 426; Acts, 426; Number of, 426; reforms, 426
Probation of Offenders Act, 1958, 120
Production-cum-distribution Scheme, 260
Prohibition, 122
Projects and Equipment Corporation of India, Ltd., 349
Public Accounts Committee, 24
Public distribution system 213; 260 *see also* Civil Supplies and Co-operation
Public Sector, 305; agencies, 348; distribution, sectorwise, 307; Employment, 306; export, 306; generation of resources, 306; investment and out-lay 203, 306; expansion of, 305; Performance, 168; production, 307; Profit, 306; performance, 168; turnover, 306, 308; Undertakings of Defence, 41
Public Sector Iron and Steel Companies (Restructuring) and Miscellaneous Provisions Act, 1978, 318
Publication and Information Directorate, New Delhi, 90
Publications Division, 68, 160
Punjab, 464

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

Q

Quick Mail Service, 374

R

Radio *see* Broadcasting
Radio Sangeet Sammelan, 136
Railways, 352—357
Administration, 355; Commodities carried by, 355; Expenditure on, 352; Finances, 355; Goods traffic, 354; Modernisation of, 352; Passenger traffic, 354; Progress under plans, 352; Rail-roads traffic ratio, 361; Rolling stock, Manufacture of. 353; Safety Works Fund, 355; Staff Welfare, 357; Zones, 355
Rainfall, 3
Raja Rammohan Roy National Education Centre, 68
Rajasthan, 465
Rajasthan Canal Project, 238
Rajya Sabha, 23; allocation of seats, 25, Members of, 500
Ramganga project, 239
Rashtriya Chemicals and Fertilizers, 324
Rashtriya Indian Military College, Dehra Dun, 40
Rationing, 213
Reactor Research Centre, Kalpakam, 80
Rehabilitation *see* Relief and Rehabilitation
Relief and rehabilitation, 132
Regional Research Laboratory, Bhubaneswar, 89
Regional Research Laboratory, Jammu, 88
Regional Research Laboratory, Hyderabad, 88
Regional Research Laboratory, Jorhat, 88
Religion, 9
Remount Veterinary Corps Centre and School, Meerut, 39
Rental Housing Scheme, 404
Research,
Agriculture, 73, 91, 224
Broadcasting, 95; audience; 139
Defence, 94
Forestry, 233
Geology, 94
Medical, 92, 104
Nuclear, 80
Power, 95
Railways, 357
Scientific, 73
Social Welfare, 122
Space, 80
Tribal, 131
Research and evaluation, 122
Research Designs and Standards Organisation, 357
Research Designs and Standards Organisation, Lucknow, 97
Research Laboratories *see* Scientific Research *see also* National Laboratories
Research and Reference Division, 164
Reserve Bank of India, 193
River System, 2
Roads, 357-361
Border roads, 358;
Construction, 357;
Expenditure under plans, 357;
Length of, 357, 359;
National highways, 358
Revenue, 361;
State Sector, 358;
Transport, 360; bodies, 361; motor vehicles, types of, 362; national permit scheme, 360; nationalisation, 360; passenger vehicles, 360; public carriers scheme, 360; rail-road goods traffic ratio, 361
Road Transport Corporation Act, 360
Rubber, 332
Rural Electrification Corporation, 284
Rural higher education, 54
Rural Labour Enquiry, 396
RURAL RECONSTRUCTION, 245-258
Agricultural Marketing, 256;
Community development, 245; financial assistance, 247; Investment pattern, 246; organisation, 246; policy, 246; Expenditure on, 246;
Integration of women in, 255;
Involvement of industrial and mercantile houses, 255
Panchayati Raj, 256; activities, 257; commodities on 257; coverage, 257 finance, 257 *Nyaya Panchayats*, 257
Rural employment, 252; benefits, 255; food for work programme, 254; industries, 253; Khadi and village industry, 253; performance, 253; self-employment training, 253
Special programmes, 246; applied nutrition, 252; distribution of blocks, 251; drought prone area, 249; integrated rural development, 250; livestock production, 249; minor irrigation, 248; small, marginal and agricultural labourers, 246-248
Training, 258
Rural, postal services, 375
Rural Workers' Education, 394

S

Sahitya Akademi, New Delhi, 65
Sainik Schools, 40
Sales Promotion Employees (condition of service) Act, 1976, 391
Sangeet Natak Akademi, 64
Sarda Sahayak Project, 239
Sardar Vallabhbhai Patel National Police Academy, 425

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

Satellite, 81
Satellite Instructional Television Experiment, 82
Satellite Instructional Television Experiment (SITE), 142
Satellite Telecommunication Experiments Project, 83
Satellite Tracking and Ranging Station, 84
Scheduled and backward classes, 122
Administration of, 128; Advisory agencies of welfare, 128; Allotment of seats in legislatures, 126; Central Schemes, 131; Coaching *cum*-guidance Centres, 131; Commission for, 128; Constitutional Safeguards, 122; Economic development, 132; Education, 132; Health and housing, 132; Hostels, 131; Representation in legislature, 124; Population, 124 125; Research Institute, 131, Reservation in promotion 126; service. 125; Scholarships, 131; State Sector Scheme, 131; Training and Coaching Centres, 131; Tribal development, 130; Untouchability, legislation against, 123; Voluntary organisation, 129; Welfare schemes, under plans, 129; expenditure on 129
Scholarships, 55, 121, 131
School of Artillery, Deolali, 39
Science policy, 73

SCIENTIFIC RESEARCH, 73-97
Agriculture, 73, 91
Anthropology, 96;
Atomic energy, 78;
Aviation, 96;
Broadcasting, 95;
Defence, 94;
Electronics, 84, 85;
Expenditure on, 73, 74;
Geology, 94;
Medical, 92;
Policy, 73;
Research Laboratories, 73;
Space research, 80-84;
Telecommunication, 96
Scooters India Ltd., 322
Sculpture, 63
Secondary Education, 50
Seeds Act, 1966, 220
(Dr) Shanti Swarup Bhatnagar Award, 87
SHAR Centre, 82
Shipping, 364-368
Bodies, 364;
Cochin Shipyard, 366;
Companies, 365;
Dredging Corporation of India, 367;
Garden reach workshop, 366;
Hindustan shipyard, 366;
Indian register of, 365;
Mazagaon Dock, 366:
Ports, 366; Major. 366; Minor, 367;
National Harbour Board, 367;
Navigational aids, 367;
Ship-building yards, 365;
Traffic, 367;
Training institutions, 365
Shipping Corporation of India, 365
Shipping, telephone services, 378
Shram Vir Awards, 395
Sikkim, 467
Sikkim Mining Corporation, 331
Silk and Art Silk Mills' Research Association, Bombay, 91
Slum clearance, 407; environmental improvement of, 407
Slum clearance and improvement scheme, 407
Small Farmers Development Programme, 246
Small Industries Development Organisation, 334
Smallpox, 100
Smith Stanstreet and Pharmaceuticals Ltd., 323
Smugglers and Foreign Exchange Manipulators (Forfeiture of Property) Act, 1976, 183

SOCIAL WELFARE, 113-133
Administration, 113; of scheduled and tribal area, 128; Border area project, 116;
Expenditure under plans, 113, 114; on scheduled castes and tribes, 129;
Organisations and advisory agencies, 114, 128;
Prime Minister's relief fund, 133;
Prisoners, 119;
Programmes of, 115 children, 117; women, 115; Maladjusted group social defence, 119; Prohibition, 122; relief and rehabilitation, 132; scheduled and backward classes, 122;
Research and evaluation, 122
National awards, 122 ,
Scholarships, 121
Social defence, 119
Social Welfare Advisory Boards, 115
Soil Mechanics and Material Research Station, 95
Solar energy, 283
Song and Drama Division, 163
South-India Textile Research Association, Coimbatore, 91
Space Application Centre, 82
Space Commission, 80
Space Research, 80-84
Special Livestock Production Programme, 249
Special Marriage Act, 1954, 417
Sports and games, 60
Staff Selection Commission, 21
Standards of Weights and Measures Act, 1976, 266
State Board of Adult Education, 52
State Chemical and Pharmaceuticals Corporation of India Ltd, 350
State Emblem, 15
State Farms Corporation of India, 219
State Finance Corporations, 299
State Seed Certification Agencies, 220
State Seed Corporation, 219

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

State Trading Corporation of India Ltd, 348
STATES AND UNION TERRITORIES, 435—485
States
Andhra Pradesh, 435
Assam, 437
Bihar, 438
Gujarat, 441
Haryana, 443
Himachal Pradesh, 445
Jammu & Kashmir, 447
Karnataka, 449
Kerala, 450
Madhya Pradesh, 452
Maharashtra, 455
Manipur, 457
Meghalaya, 459
Nagaland, 460
Orissa, 461
Punjab 464
Rajasthan, 465
Sikkim, 467
Tamil Nadu, 469
Tripura, 471
Uttar Pradesh, 472
West Bengal, 475
Union territories
Andaman and Nicobar Island, 477
Arunachal Pradesh, 478
Chandigarh, 479
Dadra and Nagar Haveli, 480
Delhi, 481
Goa, Daman and Diu, 481
Lakshadweep, 483
Mizoram, 484
Pondicherry, 485
States and Union Territories, Plan expenditure on, 204-205
Steel Authority of India Ltd., Restructuring of, 318
Steel Plants
Bhilai, 315
Bokaro, 315
Capacity of, 316
Durgapur, 315
Hindustan Steel Ltd, 318
Indian Iron and Steel Company, 315
Mini, 316
New, 315
Production of, 317, 318
Rourkela, 315
Salem, 318
Tata Iron and Steel Company, 315
Vijayanagar, 319
Visakhapatnam, 319
Visvesvaraya Iron and Steel Works, 315 *see* also Iron and Steel
Sterilisation, 111
Structural Engineering Research Centre, Roorkee, 89
Succession Law *see* Justice and the Law
Suppression of Immoral Traffic in Women and Girls Act, 120
Supreme Court, *see* Justice and the Law *see also* Court
Swasth Hind, 106

T

Tamil Nadu, 469
Tarapur Atomic Power Station, 80
Taraqui-e-Urdu Board, 59
Tawa project, 237
Taxation Laws (Amendment) Act, 1975, 183
Tea, 332; export, 340
Tea Development Corporation, 90
Tea Research Association, Jorhat, 90
Tea Trading Corporation of India, 90
Technology Development Council, 84
Tele-Communication, 96
Tele-communication Research Centre, New Delhi, 96
Telegraph Services, 378
Telephone Services, 378 *see also* Communications
Television, 82, 83, 140; centres, 140; Commercial, 142; community viewing, 142; coverage, 141; Engineering, 143; programming, 142; receiver licences, 143; school telecast, 142; SITE, 142; teleclubs, 140
Theatre, 64
Thein Dam Project, 238
Thumba Equatorial Rocket Launching Station, 82
Tobacco Board, 340; export, 340
Tourism, 369; department of, 370; expenditure on, 369; facilities of, 370; incentive for tourists, 370
Tourists Meteorological Services, 372
Town and Country Planning Organisation, 405
Towns, number of, 11, 13
Trachoma, 101
Trade *see* Commerce
Trade Development Authority, New Delhi, 346
Trade Fair Authority of India, 347
Trade Union Act, 1926, 389
TRANSPORT, 352—372
Civil aviation, 368
Inland waterways, 361
Meteorology, 371
Railways, 352
Rail-road goods traffic ratio, 361
Roads, 357
Shipping, 364
Tourism, 369
Transportable Remote Area Communication Terminal, 83
Tribal Co-operatives, 272
Tribal Development *see* scheduled castes and scheduled tribes
Tripura, 471
Triveni Structurals Ltd, 320
Tuberculosis, 101
Tuberculosis Research Centre, Madras, 92
Tungabhadra project, 235
Tungabhadra Steel Products Ltd. 320

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

U

Ukai multipurpose project, 236
Unemployment, 171, 172 *see also* Employment
Union and territories, 18
Union Carbide India Ltd, 323
Union of India
  Executive, 19
    Administrative set up, 20
    Cabinet Secretariat, 21
    Council of Ministers, 20
    President, 19
    Vice-President, 20
  Legislature, 22
    Allocation of seats and party position, 25
    Functions and power of, 24
    Lok Sabha, 23
    Membership of, 23
    Opposition, 23
    Parliamentary Committees, 24
    Privileges, 23
    Rajya Sabha, 23
  States, 29
    Council of Ministers, 30
    Executive, 29
    Governor, 30
    Legislature, 30
    Planning, 30
    Powers and functions, 31
    Vidhan Parisad, 31
  Vidhan Sabha, 31
Union Public Service Commission, 21
Unit Trust of India, 300
University and higher education, 50, 517
University Grants Commission, 50
Urban Art Commission, 406
Urban Development, 405
Urban Land (Ceiling and Regulation) Act, 1976, 405
Untouchability, 123; amendment and miscellaneous provision act, 1976, 123; legislation, 123; welfare of, 128
Upper Krishna Project, 236
Uttar Pradesh, 472

V

Vadya Varinda, 136
Vaidyas, 103
Vaikunth Mehta National Institute of Co-operative Management, 273
Vallabhbhai Patel Chest Institute, Delhi, 93
Vande Mataram, 16
Venereology Diseases, 101
Venereology Government General Hospital, New Delhi, 101
Veterinary Colleges, 228, Hospitals, 228
Vice-President, 19, 20, 499
Vikram Sarabhai Space Centre, 81
Villages, 11, 12
Village and Small Scale, Industry, 332; credit facilities, 334; development, 333; District Industries Centre, 335; expenditure on plan, 333; import policy, 334; organisation, 334
Village Housing Project Scheme, 404
Visvesvaraya Industrial and Technological Museum, Bangalore, 91
Vividh Bharati, 138
Vocational guidance, 397; advanced training scheme, 399; programme for women, 400; research, 400; technical education, 50; training programme, 398; women, 400
Voters, number of, 17

W

Wages and earnings, 384; Occupational Survey, 385; regulation of, 384
Wall Newspaper, 151
War Victims, rehabilitation of, 44
Water supply & sanitation, 109
Waterways, inland, 361; bodies, 364; expenditure on, 364
Weaker Section, Co-operative for, 272
Welfare *see* Social Welfare
Welfare of, railway staff, 357
West Bengal, 475
Wholesale price index, 262
Wild Life (Protection) Act, 1972, 4
Wild life sanctuaries, 4
Women, 115; Committee on Status, 115; dowry, 115; education, 53, 115; functional literacy, 115; hostels, 116, 131; *Mahila Mandal*, 116; polytechnics, 51; rural reconstruction, 255; vocational training, 115, 400
Wool Research Association, Bombay, 91
Workers *see* Labour
Working Journalist Act, 391
Working population, distribution of, 382, 383
Workmen's Compensation Act, 1923, 392
World Book Fairs *see* Books
World Intellectual Property Organisation, 69

Y

Yoga, 104
Youth Centres, 61
Youth services, 60
Yuvak Kendras, 60
Yuvavani, 139

Z

Zila Parishad, 246, 254
Zinc and lead, 331
Zonal Council, 32
Zoological gardens, 4

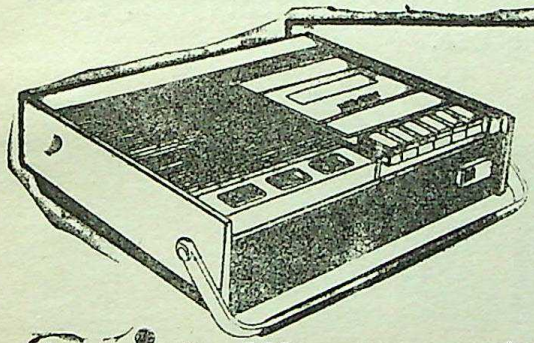
MGIPF—122DPD/80—15,000—27-9-80

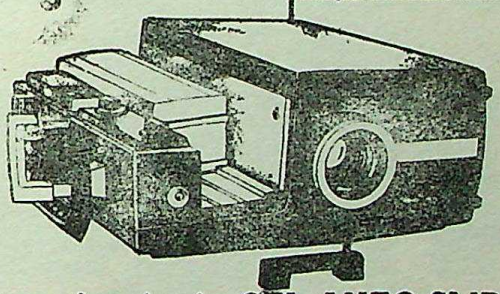
CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

Ideal for Education, Advertising & Promotion

SYNCHRONISED AUDIO-VISUAL SYSTEM AVS 40

from **CEL**





A versatile AV system consisting of a single CEL AUTO-SLIDE PROJECTOR AP 100, a CEL SYNCHRONISER SU 170, a mono/stereo tape recorder, cassette/reel type and a loud speaker.

SU 170 correlates the visual information on the slides with the commentary on the tape.

Very effective medium for advertising and sales promotion, teaching, seminars, conferences, trade fairs, etc. etc

The various units can also be bought independently to build the system.

Developed in collaboration with **CEERI, Pilani.** Project Sponsored by DST

CEL **CENTRAL ELECTRONICS LTD.**

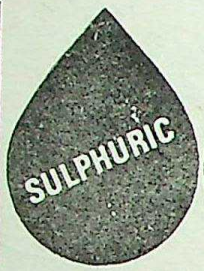
(A Government of India (Deptt. of Science & Technology) Enterprise)

Factory : 4 Industrial Area, Sahibabad-201010 (U.P.)

Phone : 202192. Grams : CELFERCORE, Ghaziabad. Telex : 0592-203 CEL-IN

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

The life-blood of industry



Sulphur has marked the progress of mankind since the beginning of civilisation. When alchemy gave way to true chemistry, new high-strength acids were discovered. The Industrial Revolution made great demands on the then budding chemical industry because weak, natural acids and alkalis were insufficient for large-scale industrial use.

During the space of a 100 years, several basic industries appeared—all requiring sulphuric acid. Indeed, sulphuric acid is so essential to industry that its quantum of consumption has been called "the barometer" of a country's industrial development.

DMCC produces more than a tenth of India's sulphuric acid.

The Dharamsi Morarji Chemical Company Ltd.

Prospect Chambers, 317/21 Dr. Dadabhoy Naoroji Road, Bombay 400 001.

everest/79/DMCC/115

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

allana

making a name for India in world markets

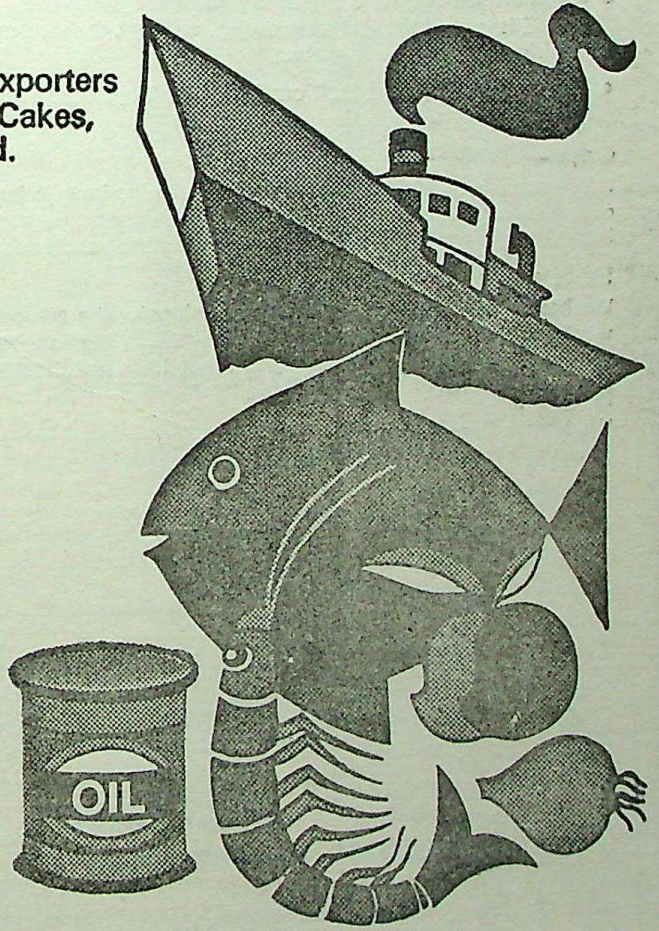
The ALLANA Group covers wide and varied ground from manufacturing to import-export and shipping. Take a look at what ALLANA has to offer!

ALLANASONS PRIVATE LIMITED
Government Recognised Eligible Export House.

ALLANA OIL MILLS
Manufacturers, Importers and Exporters of Edible Oils, Refined Oils, Oil Cakes, Deoiled Cakes and Animal Feed.

ALLANA COLD STORAGE PRIVATE LIMITED
Exporters of fresh and frozen fruits and vegetables, canned and frozen seafood and meat products.

ALLANA LINES
Shipowners and charterers, owners of India's first fully reefer ship.



ALLANA
A trusted business house since 1865.

ALLANA Building,
424, Maulana Azad Road,
Post Box No. 3646,
BOMBAY-400 004. India.

Phones : 363611-15.
Cable : 'ALLANASONS'.
Telex : ALNA—011-3317 • 011-4848

Dattaram APT-15

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

IDM

WHO ARE WE?

—A unique venture of professionals dealing in all aspects of computer business in India and abroad.

—An All-India organization, the only one of its kind in India.

—A Company wholly owned by its employees.

WHAT CAN WE DO FOR YOU?

Feasibility Study for Mechanization:

Carry out feasibility studies to improve various aspects of your business like Accounts Receivable, Inventory Control, Financial Accounting, Requirement Generation, Exam. Processing, Electricity Billing, Project Evaluation and Review, Skill Inventory, etc. etc.

Data Processing Centres:

Carry out the above jobs at our Data Centres in Bombay, Calcutta Delhi or Madras.

Computers:

If you are looking for a computer of your own, we have several economic solutions to offer. Whatever be your choice, we provide all necessary training and software/hardware support to make your installation a success.

- Nelco 3000 Business System—a powerful and effective entry level system.
- If you are looking for a larger computer, we believe the PRIME Computer System is the right choice. PRIME is one of the fastest growing, widely accepted computers that can be upgraded at your location as your needs grow.
- Should you be on the look out for a very large computer system, we have the NASCO Computer System to offer.

Cards/Ribbons:

If you already have a Computer/Data Processing installation, we can provide you with all your needs of Punch Cards, Ribbons and other supplies. In fact, we are the largest Punch Card manufacturers in India, backed up by a sophisticated laboratory and necessary technical skill in paper technology.

Software Development:

We have a team of highly skilled professionals who can carry out the necessary software development work for you very economically. Our increasing number of customers abroad are finding our services to be the right cost effective solution they have been looking for.

R & D:

We have a Research and Development wing working on various development works. Should your need be such that requires special engineering, we have our R & D Unit to support you.

Consultancy:

Our team of experts handle all kinds of technical and management consultancy work for our customers.

For further information and/or business enquiries, please write to:

International Data Management Private Limited

Safed Pool
Kurla-Andheri Road
Bombay 400 072
Telephone No. 677081

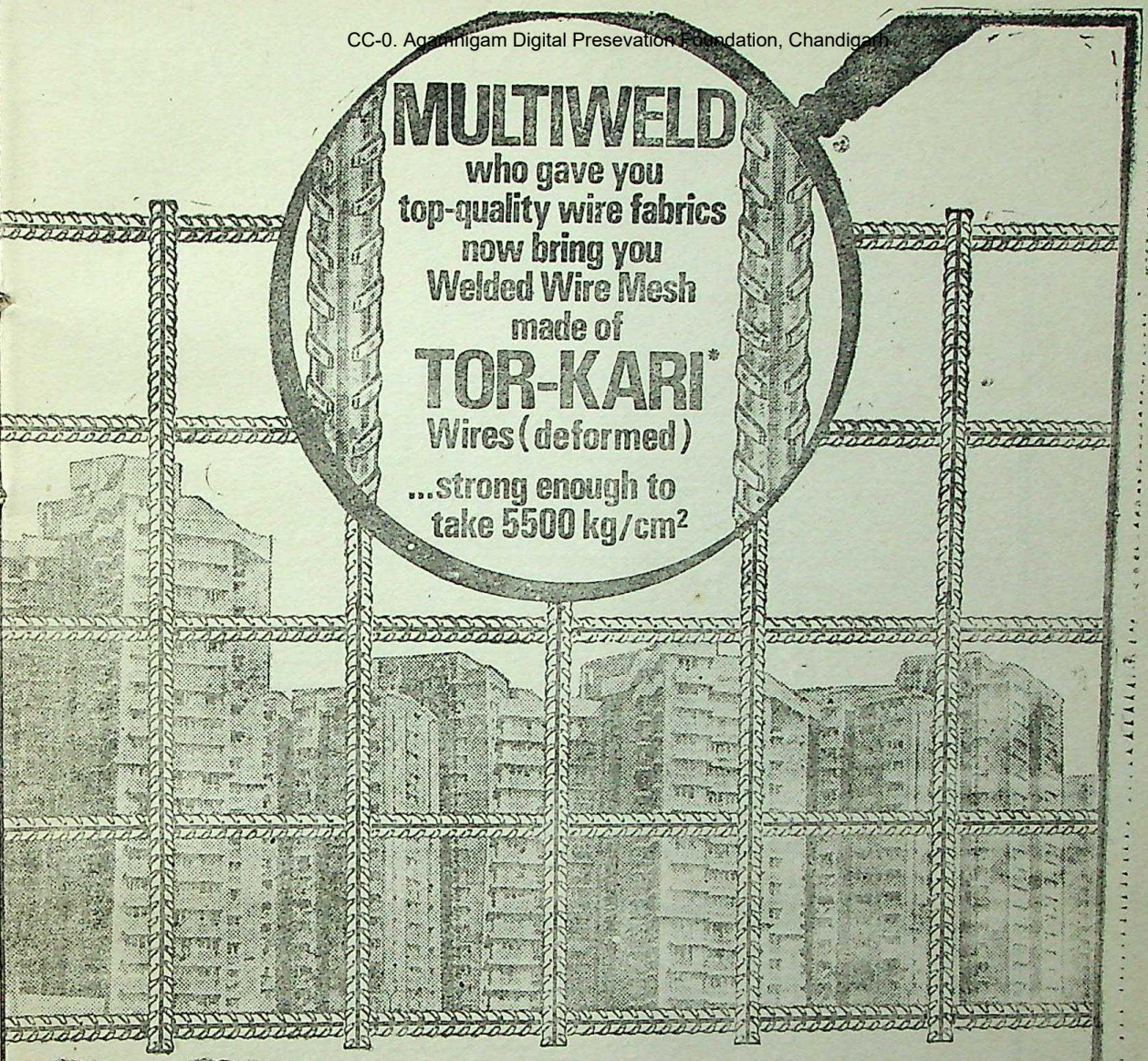
Express Towers, 16th Floor
Nariman Point
Bombay 400 021
Telephone No. 231020

28, Camac Street
Calcutta 700 016
Telephone No. 444841

3, Moores Road
Madras 600 006
Telephone No. 812381

Nehru House
4, Bahadur Shah Zafar Marg
New Delhi 110 002
Telephone No. 279611

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh



TOR-KARI IS STRONGER

TOR-KARI is more than twice as strong as plain mild steel bars. With a minimum Proof Stress of 5500 kg/cm² (at 0.2% elongation) it can be economically used for all types of reinforced concrete construction. TOR-KARI conforms to international standards like BS DIN and ASTM specifications.

TOR-KARI SAVES STEEL

Every time you use TOR-KARI mesh of ribbed wires, you save precious steel. Because of its strength and quality, you need only 0.45 tonne of TOR-KARI to replace one tonne of mild steel. Result? 55% saving in steel!

TOR-KARI CUTS COSTS

When you use TOR-KARI, you reduce your costs up to 45% and yet you get stronger and better welded wire mesh. In short, TOR-KARI cuts your costs and boosts your profits.

TOR-KARI'S OTHER FEATURES

* Extra safety due to hyper resistance * Less crack width * Greater fatigue strength * Greater bond strength * Available in various diameters and spacings of sizes,

Apart from fabrics TOR-KARI wire is also available in coils and cut-straight lengths.

For detailed information contact:

MULTIWELD WIRE CO.PVT. LTD.
59, Marol Maroshi Road,
Bombay 400 059. INDIA.

MULTIWELD
-always first with the latest

* Manufactured under licence from Tor-Isteg Steel Corporation, Luxembourg.

Imageads-MW-65

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

Seven Decades of Bank of Baroda

1908 1980

Bank of Baroda was born in 1908 in the city of Baroda. Today, it is represented in 6 continents, with 57 overseas offices in 13 countries. Its Indian branches number over 1400.

Over the years the Bank has helped develop various sectors of the Indian economy—it has enlarged the rural horizon, given impetus to industry and helped uplift the common man.

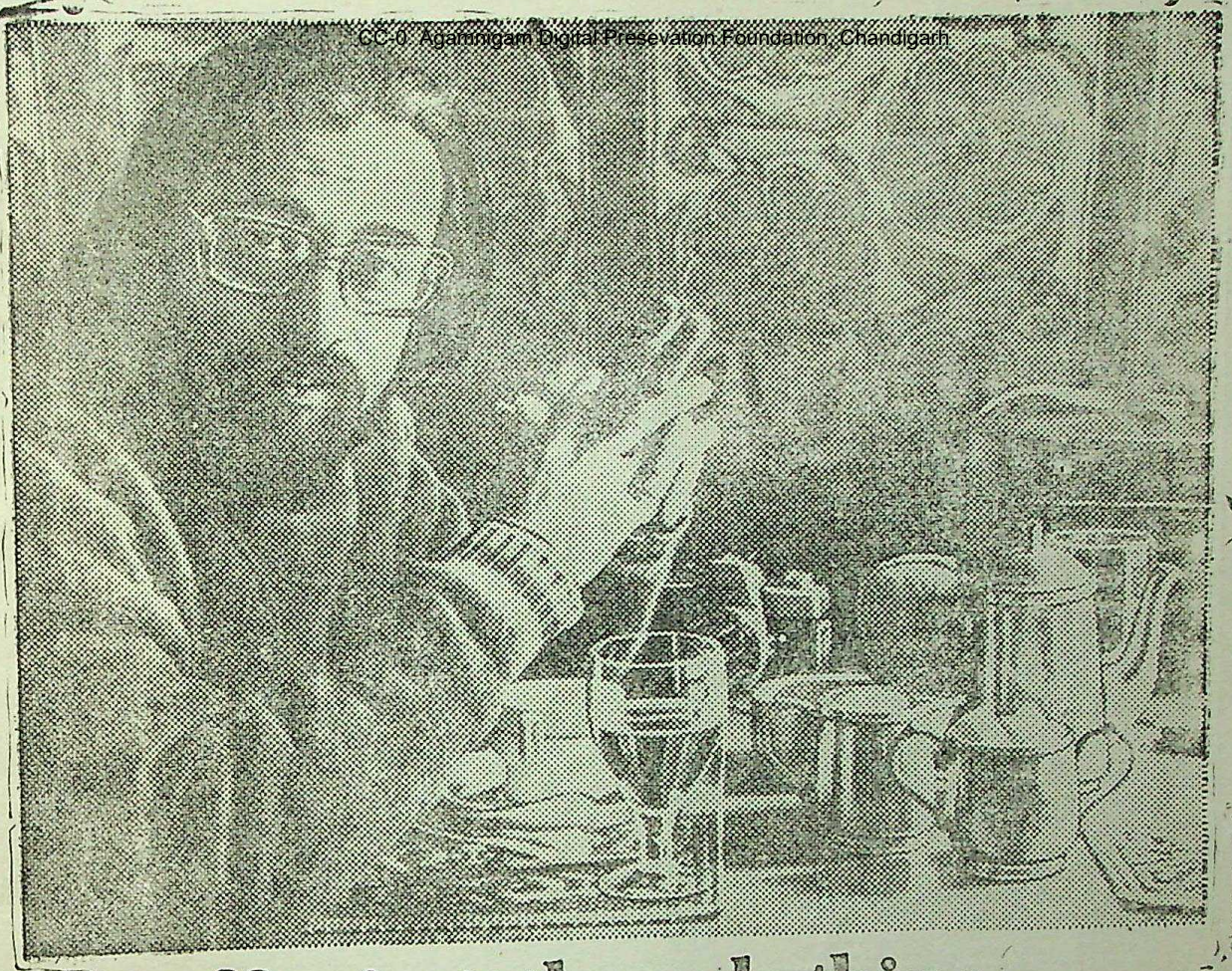
With working funds of over Rs. 3,000 crores, deposits of over Rs. 2,400 crores and advances of over Rs. 1,400 crores, it is among the premier financial institutions of the country.

Bank of Baroda

(A Govt. of India Undertaking)

Sobhagya-BOB/80/16

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh



Coffee isn't the only thing that goes down well at the Akbar.

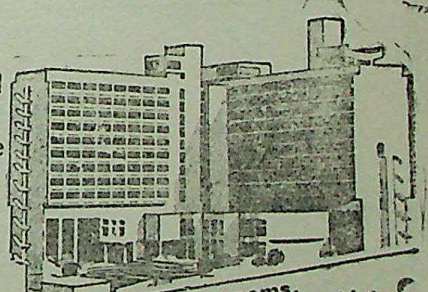
"When you've been out shooting all day, and come back dog tired, it's nice to see a smile and steaming coffee in front of you in a matter of moments."

There's lots at the Akbar that's new. A larger lobby, shopping arcade and another restaurant. Not to mention 150 more rooms ! But that detracts nothing from the familiar charm and vintage atmosphere at the Akbar. The service as superb, the aura as exclusive.

Swim the hours away at the pool, take in a snack at the Madhuban or dine in regal style at the Sheesh Mahal. Or just rent a Mercedes and drive off wherever you want.

The Akbar. There's no reason why you should stay anywhere else.

Because it's the Akbar.



Now ! 150 more rooms, a new restaurant, larger lobby & shopping arcade.

ITDC Instant Reservation Service
Tel. Bombay 232722
Calcutta 440901
Madras 88520

Akbar Hotel
Chanakyapuri, New Delhi 110021
Tel 370251 Cables AKBOTEL Telex 031-2863

The Ashok Group

CC-0. Agamnigam Digital Preservation Foundation, Chandigarh

BEL... In 25 years vertically integrated from base materials to versatile electronic systems

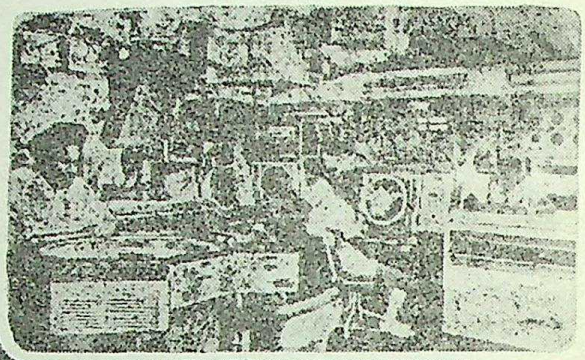
Materials Devices Modules Equipment Systems

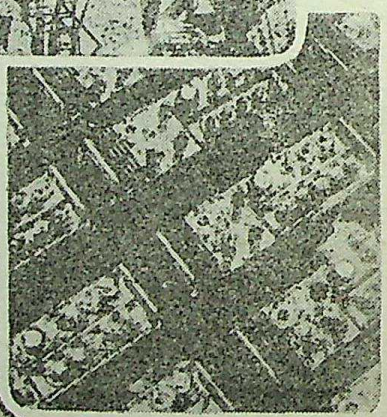
About 25 years ago, the electronics revolution had just begun. Bharat Electronics Limited played its modest part in this revolution with the production of just two items. The design was foreign, the components were imported, put together, assembled, tested and delivered to BEL's first customer.

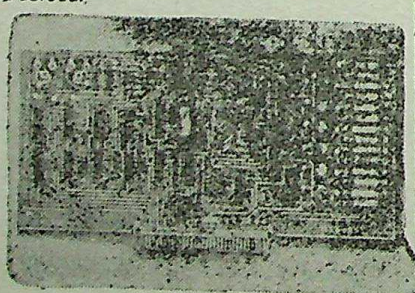
In 25 years, the demands of industry and the requirements of national security have led to the development of ever more complex systems composed of different equipment performing diverse functions configured into complete systems to serve national needs.

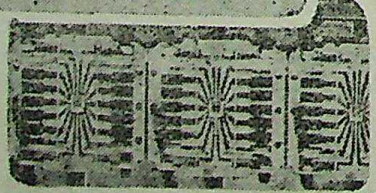
In these 25 momentous years, from its modest beginnings, BEL has grown into a giant national enterprise manufacturing 350 different products to serve the diverse needs of such national customers as the Defence Forces, Police, All India Radio, Doordarshan, Railways and Civil Aviation. Today BEL is self-reliant in design capability. A majority of BEL's products are the result of its own Design & Development.

The story of this transformation at BEL is the story of the build-up of three tiers of vertical integration. In the first tier, BEL transforms raw materials into parts — a crucial step that distinguishes a self-reliant industry from a dependant one. In the second tier, BEL's different Divisions integrate parts into functional modules and reliable equipment. In the third transform making up the last tier, BEL configures different items of equipment into complete systems to serve the needs of a variety of customers, both in India and abroad.









Bharat Electronics Limited
(A Government of India Enterprise)
Bangalore • Ghaziabad • Pune

BEL

Registered Office
29/4 Race Course Road
Bangalore 560 001

VC/BEL/243/79

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

If no friend of yours has ever told you about the need to take a life insurance policy, it is time you thought of widening your circle of friends

Beneath an acacia tree, you watched the Singapore dawn burst from a tropical sea.
Who are you?
What do you dream of?
Was it you I saw in Rome? You sat by the Trevi Fountain in your Sarong Kebaya and cast a single coin.
What were you wishing?
Now, aboard this giant Boeing I see you again. You bring me a pillow.
And serve brandy with a smile to a tired father. The brochure in my seat pocket tells me that you fly to half the world and more. But it doesn't tell me what you are thinking.
Who are you, Singapore Girl?
When will I see you again?

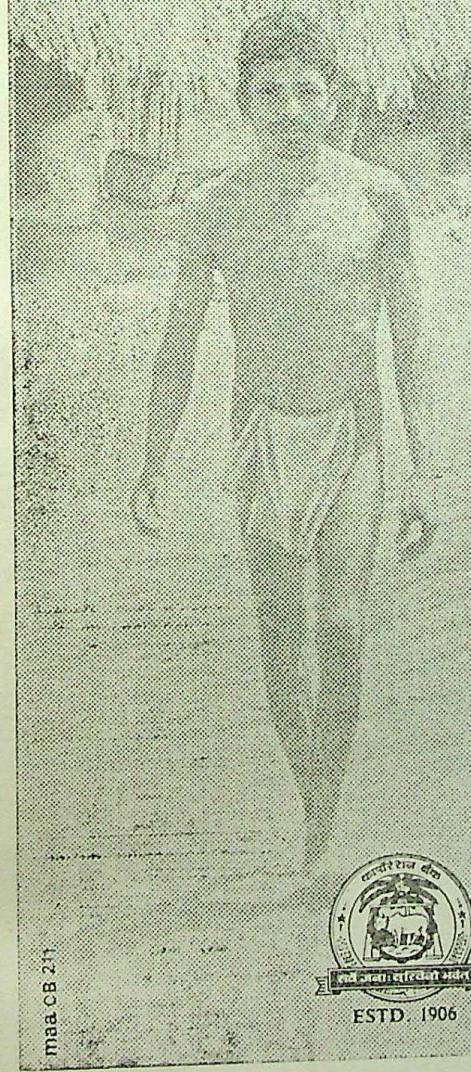
CC-0. Agamnigam Digital Preservation Foundation,Chandigarh

SINGAPORE AIRLINES

Who are you?

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

People in 105 villages know only one Bank–CORPORATION BANK



Corporation Bank, the oldest bank in Karnataka, joined the mainstream of Public Sector Banking on April 15, 1980. We are now one of the twenty nationalised banks wholly owned by the Government of India.

The Bank's credit policy has now been streamlined to help integrated rural development, to provide credit to the priority sector — the small and marginal farmers, agricultural labourers, especially scheduled castes and scheduled tribes — to help increase industrial and agricultural production and to step up exports.

Vigorous measures have already been initiated to implement the Twenty Point Economic Programme. Alongside, Corporation Bank will go all out to mobilise small savings.

The new status has given us greater responsibilities in terms of manpower planning and development of professional skills to meet the growing demands of the community.

We have had a smooth "take off" as a nationalised bank as we had always been "a small man's bank," serving the rural areas and the rural people. Of the 315 branches our tally of branches in rural and unbanked centres is 198. And in 105 centres we are the only bank.

It has been our earnest endeavour to see that the fruits of a planned development programme are shared by as vast a majority of the masses as possible—especially the weaker sections.

ESTD. 1906

75 Years of Purposeful Banking

Corporation Bank

(Wholly owned by Government of India)

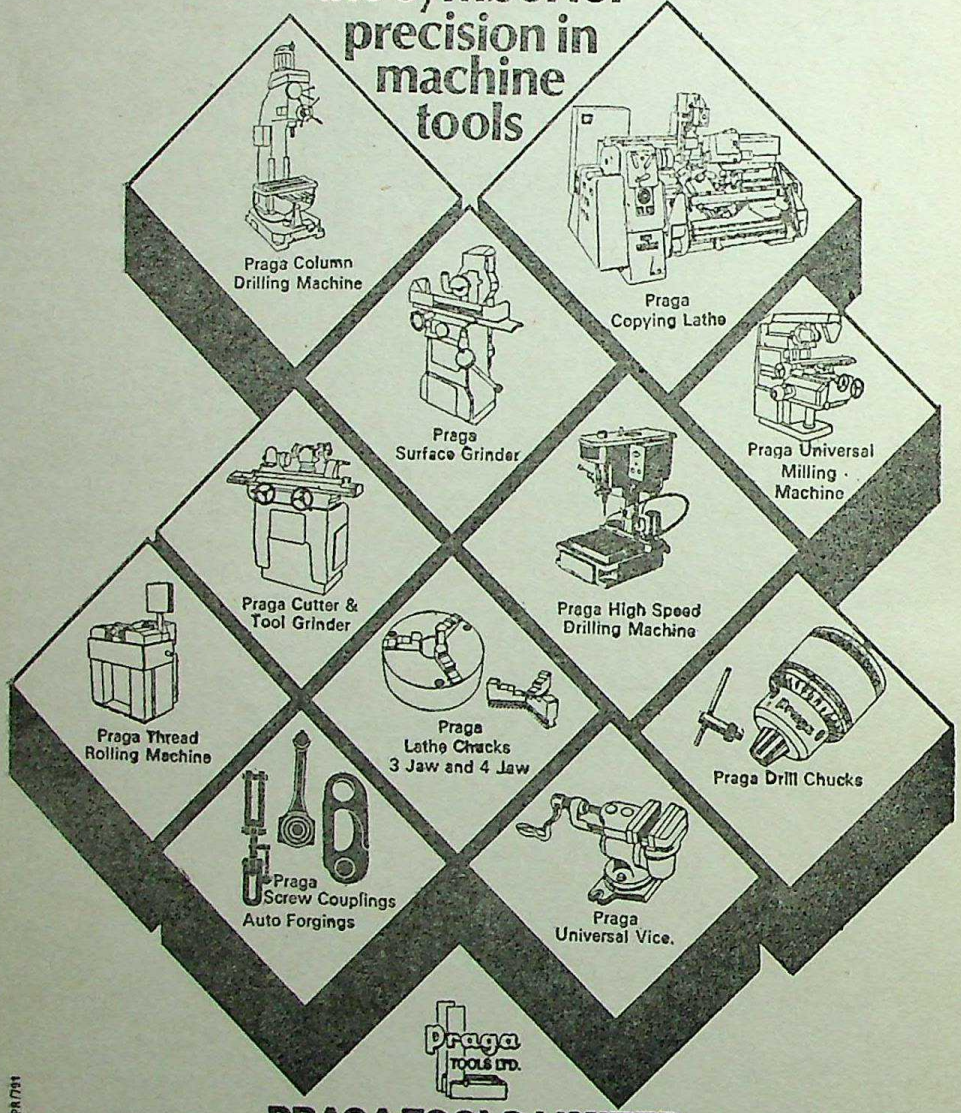
Head Office: Mangalore Custodian: N. N. PAI

maa CB 211

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

Praga

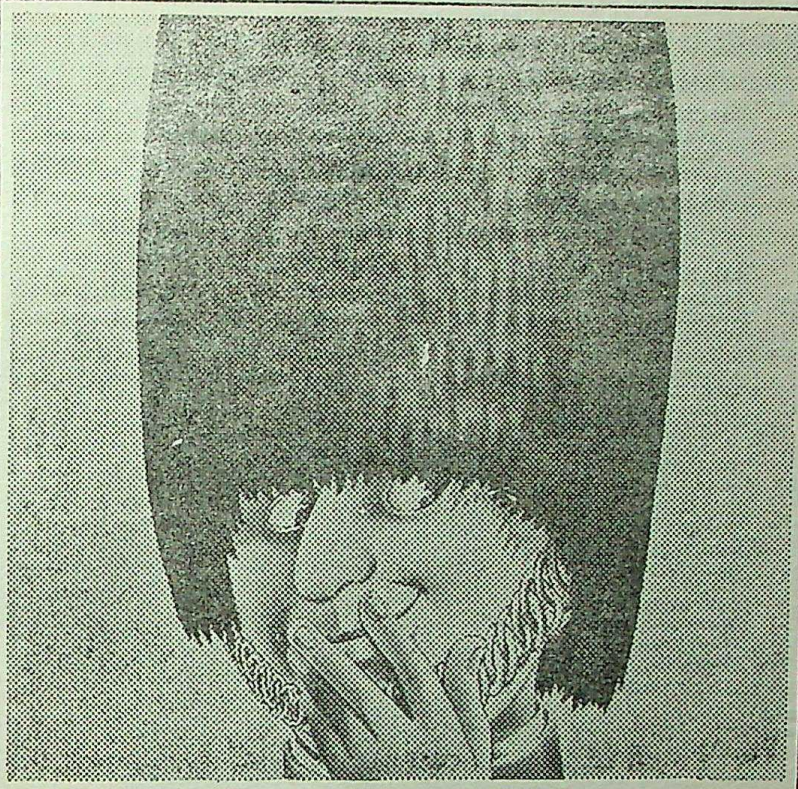
the symbol for precision in machine tools



PRAGA TOOLS LIMITED
Kavadiguda, Secunderabad 500 003

ASP/PR/791

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh



Take London off guard.
Eleven times a week.

Faster, direct 747 flights to London and back.

Surprise. Before you know it, you're in London. On our direct flights—all 747s. You could even catch the guards changing!

And if you're in a hurry to get back to India, hop on to any of our five London-Delhi non-stop or two London-Bombay non-stop flights.

For details, contact your Travel Agent or Air-India.

एअर-इंडिया
AIR-INDIA

More 747s. More direct flights. More cargo space.

AI-6016 A

CC-0. Agamnigam Digital Preservation Foundation, Chandigarh

IPCL offers several chemicals that can help you build your future

IPCL, India's largest petrochemicals complex, has gone on full stream. Thus offering you a wide range of chemicals in addition to their already well-known aromatic products—Orthoxylene, Mixed Xylene and Solvent CIX. All from a single source, near at hand.

All these chemicals and chemical intermediates are made indigenously to rigid international specifications. As well as to IPCL's own stringent standards. Take a look at the range...

Acetonitrile:
For the extraction of butadiene and as a chemical intermediate for the manufacture of dyes and pharmaceuticals.

Acrylonitrile:
A raw material for the manufacture of synthetic fibres, thermoplastics, synthetic rubber and chemical intermediates for the adhesive, surface coating, dye and pharmaceutical industries.

Benzene:
An intermediate for the manufacture of dyes, insecticides, nylon, pharmaceuticals, thermosetting resins and thermoplastics like polystyrene and styrene butadiene rubber.

Ethylene Oxide:
For the manufacture of intermediates which find application in surfactants, pharmaceuticals, fungicides, brake-fluids, gas scrubbing agents and solvents.

Heavy n-Paraffins:
For the manufacture of fatty alcohols, fatty acids, linear olefins, bioproteins and chlorinated paraffins.

Linear Alkyl Benzene:
A basic material for synthetic detergents.

Poly Alkyl Benzene:
An intermediate for the manufacture of emulsifiers and lubricating oil additives.

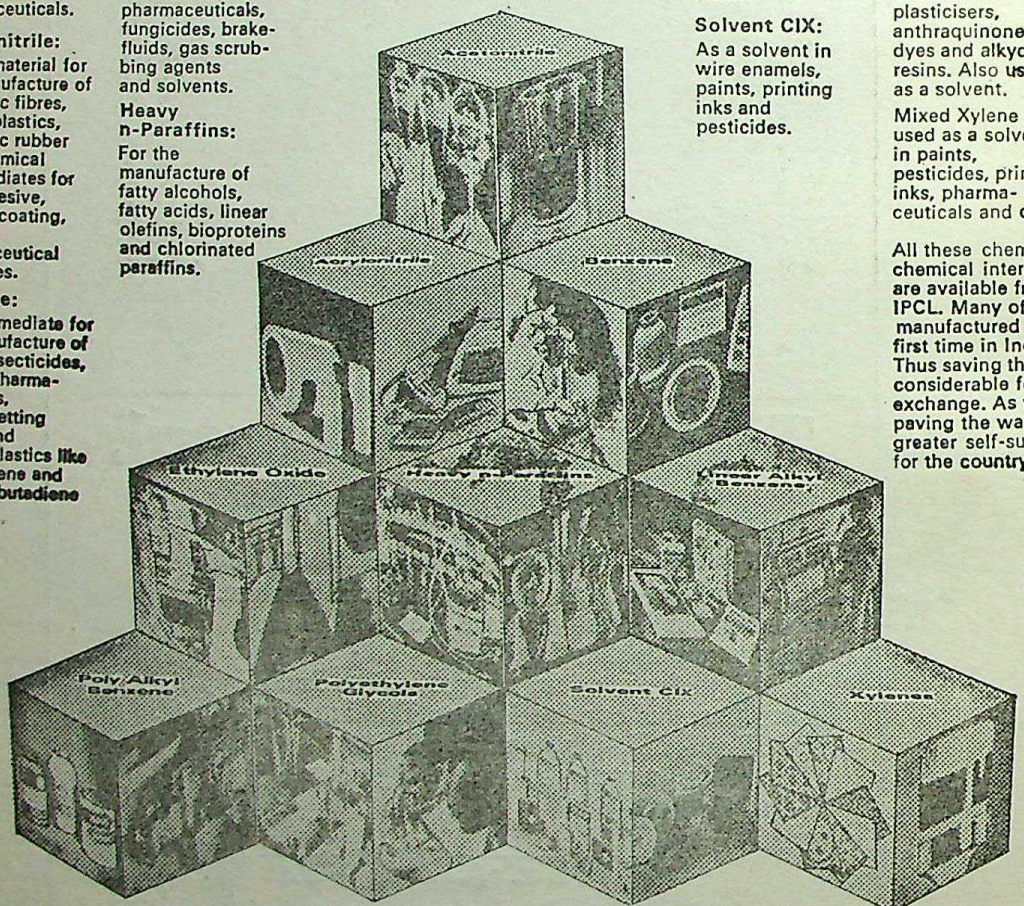
Polyethylene Glycols:
An intermediate for the manufacture of pharmaceuticals, surfactants and resins.

Solvent CIX:
As a solvent in wire enamels, paints, printing inks and pesticides.

Xylenes:
Orthoxylene is used for the manufacture of phthalic anhydride which is an intermediate for plasticisers, anthraquinone dyes and alkyd resins. Also used as a solvent.

Mixed Xylene is used as a solvent in paints, pesticides, printing inks, pharmaceuticals and dyes.

All these chemicals and chemical intermediates are available from IPCL. Many of them manufactured for the first time in India. Thus saving the country considerable foreign exchange. As well as paving the way for greater self-sufficiency for the country.



SAA/IPCL/1510 B

IPCL
Your new source of a wide range of chemicals

For more information, contact:
Marketing Division
Indian Petrochemicals Corporation Limited
P.O. Petrochemicals
Dist. VADODARA 391 346
Gujarat

Air-India Building,
19th floor, Nariman Point,
Bombay 400 021

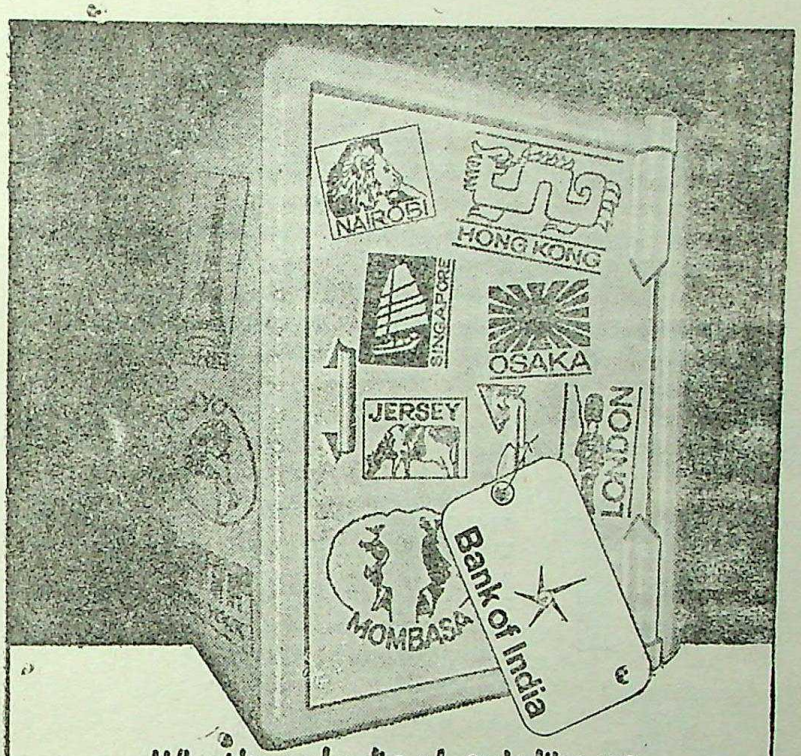
Ralla Ram Building,
70, Mission Road,
BANGALORE 560 027

Baroda Sales Office
P.O. Petrochemicals
Township
Dist. VADODARA 391 345
Gujarat

Chatterjee International Centre, 3rd floor,
33-A, Chowinghee Road,
CALCUTTA 700 071

Himalaya House,
2nd floor,
23, Kasturba Gandhi Marg,
NEW DELHI 110 001

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh



What's an Indian bank like us doing in foreign cities like these?

Plenty. Bank of India's giving a strong fillip to export and import trade. We conduct Euro-currency operations. Promote joint ventures. Arrange for shipping loans, packing credit, letters of credit, forward cover. And perform a multitude of other international banking activities.

We began our globe-girdling in 1946 with our London branch. Now Bank of India has 25 offices in 9 countries in 4 continents. To say nothing of over 1300 branches at home, many of which are equipped to handle foreign exchange business. It's no surprise that we won three consecutive national awards for export promotion.

Bank of India

(A Government of India Undertaking)

Where service makes the difference.

daCunha/BOI/46

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

'ATUL—INDIA'S GIANT CHEMICAL COMPLEX GUARANTEES YOU THE BEST QUALITY AT A REASONABLE PRICE AND DELIVERY SCHEDULE

IF YOU MUST HAVE THE BEST

DYESTUFFS

For Cotton Textiles, Viscose, Wool, Silk, Paper, Jute, Leather and Man-Made Fibres:
Acid Dyes, Metalan Dyes
(1:2 Metal Complex Dyes), Metalex Dyes
(1:1 Metal Complex Dyes), Tulachrome Dyes
(Mordant Dyes), Direct Dyes, Direct Fast, Direct Light Fast and Direct Supra
Light Fast Dyes Tulathols, Tulabases, Tulaprint Pigment-Emulsions, Tulagenes (Rapid Fast).
Sulphur Black (Grains & Powder).
Basic Dye-Bismark Brown R.
Disperse Dyes: Tulaceron for Acetate, Tulasteron for Polyester, Tulanyron for Polyamide.
Oil Dyes & Food Dyes.

CHEMICALS

Sulphuric Acid, Chlorosulphonic Acid, Oleum 25% & 60%, Hydrochloric Acid 30%, Caustic Soda Lye (Rayon Grade), Caustic Soda Flakes (Rayon Grade), Potassium Hydroxide Flakes, Chlorine, Phosgene, Methylchloroformate, Ethylchloroformate, Phosphoroustrichloride, Sodium Thiosulphate (Hypo) Crystals and Powder and 2:4 Dichlorophenol.

FLUORESCENT WHITENING AGENTS

For Paper: Swetak CT. For Cotton Textiles & Viscose: Swetak MNA and Swetak CR.
For Polyamide: Swetak NR.
For Polyester: Swetak PE-R.

WEEDICIDE

2:4-D-Sodium (Technical)

PHARMACEUTICALS

Quiniodochlor I.P., Nikethamide I.P., Saccharin U.S.P., Saccharin Sodium I.P., Sulphadiazine I.P., Halazone N.F., Sulphathiazole B.P.C., Menadione I.P., Acetomenadione I.P., Menadione Sodium Bisulphite I.P., and Tolbutamide I.P.

PHARMACEUTICAL INTERMEDIATES

Dicalcium Phosphate (Dentifrice grade), Dicalcium Phosphate (I.P. grade), Methyl Dichloro Acetate, Tolyl-p-Sulphonyl Ethyl Carbamate, Para Chlorobenzene Sulphonamide, Paratoluene Sulphonamide, Paratoluene Sulphonyl Chloride and Urethane.

DYES INTERMEDIATES

Beta Naphthol, B.O.N. Acid, Chicago Acid, Metanitroaniline, G-salt, Gamma-Acid, H-Acid, J-Acid, J. Acid Urea. Metaphenelyenediamine (distilled), Peri Acid, Schaeffer's Acid, Sodium Naphthionate, Sulfanilic Acid, Tobias Acid, Michler's Ketone, Monoethyl Aniline and R salt.

For your requirements please contact:
Marketing Department

® THE ATUL® PRODUCTS LTD.
P.O. Atul, Dist. Valsad-396 020 Gujarat (India)
Tel: 61 Gram: "TULA" Atul. Telex: 0173 232 "ATUL IN"

Adroit-3037

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

Winning against stiff International competition,

De Smet (India) has delivered-on time-turnkey projects worth Rs. 5 crores.

To Sudan, Iran, Yugoslavia, Malaysia, Tanzania and the Phillipines and Indonesia.

De Smet. A name that brings to mind quality and precision of the highest order.

De Smet (India), equipped with a highly advanced R & D cell, has brought solvent extraction project expertise bang on par with anything U.S.A., Germany or Japan can offer. In design. In quality. In execution. And in service. It has executed turnkey projects worth Rs. 5 crores all over the world.

And in India, there are 150 De Smet plants running full stream. And, sticking to precise time schedules, 18 more are on their way.

Other De Smet Activities

De Smet's range of activities includes plants for Vegetable Oil Milling, Oil Refining, Vanaspati, Cotton seed processing, Cattlefeed, Beer, Guar Gum and Sulphuric Acid.

You'll do well to consult De Smet.

ARMS-DIPL-6-140

For further information write to:

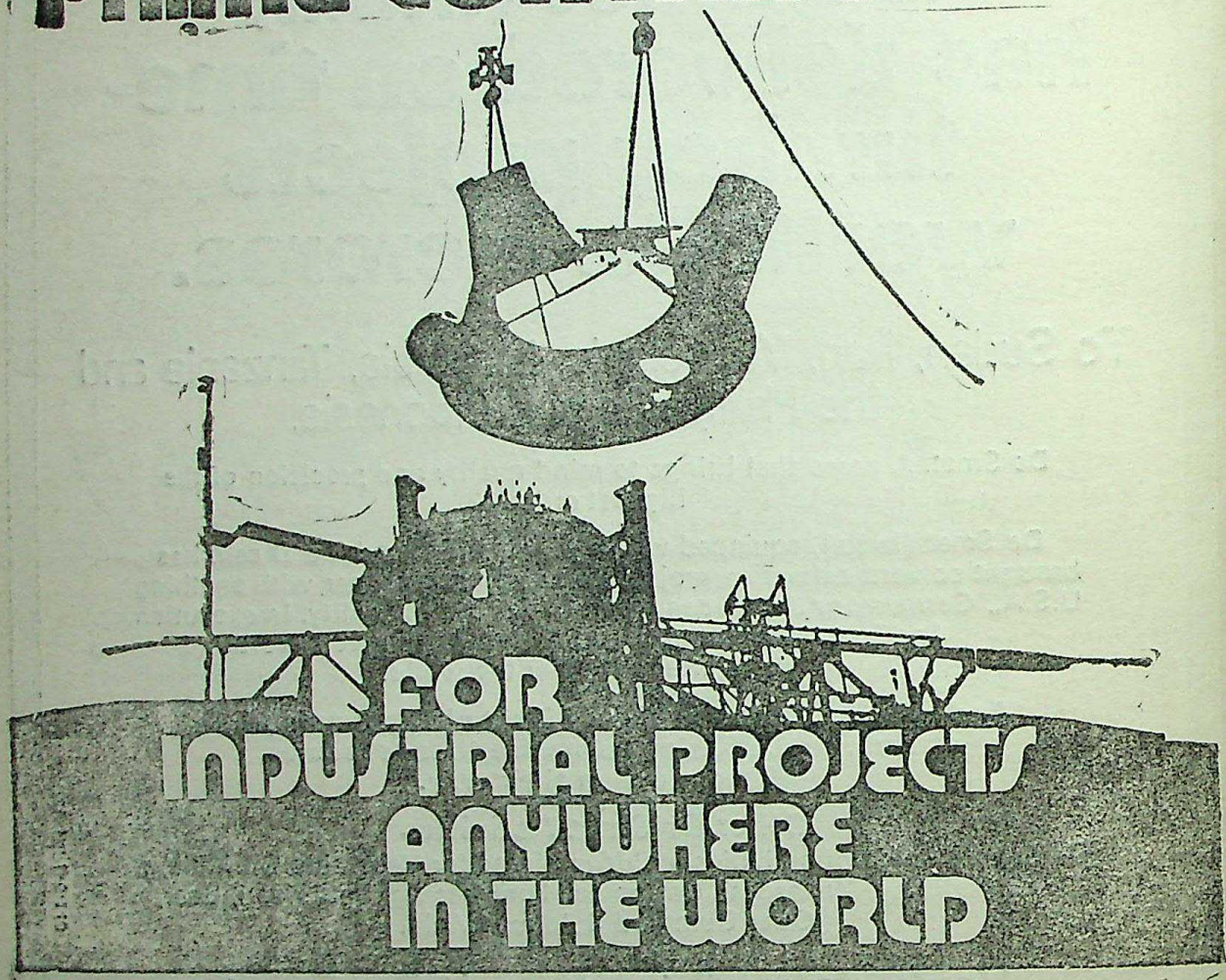
De smet

(India) Pvt. Ltd.

Shree Niketan, Shiv Sagar Estate,
Post Box No. 16582 Bombay-400 018
Tel: 391921

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

DYNAMIC PRIME CONTRACTORS



FOR INDUSTRIAL PROJECTS ANYWHERE IN THE WORLD

In Kuwait today, Iraq tomorrow. Saudi Arabia the day after. EPI's fast paced turnkey expertise reaches out all over the world with massive industrial projects and large civil construction works.

Coke oven batteries, electric arc and reheating furnaces, crude oil and gas pipelines, slag granulation projects, all kinds of material handling projects, raw ore blending and storage plants, power transmission lines, airports, bridges, silos, stadia, housing complexes, complete townships and much more.

Out of a total project value of Rs. 831 crores, Rs. 579 crores springs from our foreign assignments. An indication of our worth in international markets.

EPI

ENGINEERING PROJECTS (INDIA) LTD.
(A Government of India Enterprise)
'Kailash', Kasturba Gandhi Marg,
New Delhi-110 001 (INDIA)

Rowfields

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

We are 60 in 5 years!

TROIKA at the age of 5 has the experience of 60.

This is what M/s Troika Processes Pvt. Ltd. have accomplished by steaming 60 Turnkey Projects in the last 5 years of their existence.

TROIKA is a prominent name in the field of Oil and Fat Technology.

For any of your requirements in the following Projects, on turnkey basis kindly get in touch with us.

1. Oil Milling Plants.
2. Solvent Extraction Plants.
3. Vegetable Oil Refining Plants.
4. Vanaspati Plants
5. Industrial Oil Hydrogenation Plants.
6. Cattlefeed Plants.
7. Soyabean Processing Plants.
8. Rice Bran Processing Plants.
9. Fat Splitting Plants.
10. Cottonseed Processing Plants.

We also design, install and commission plants.

Troika

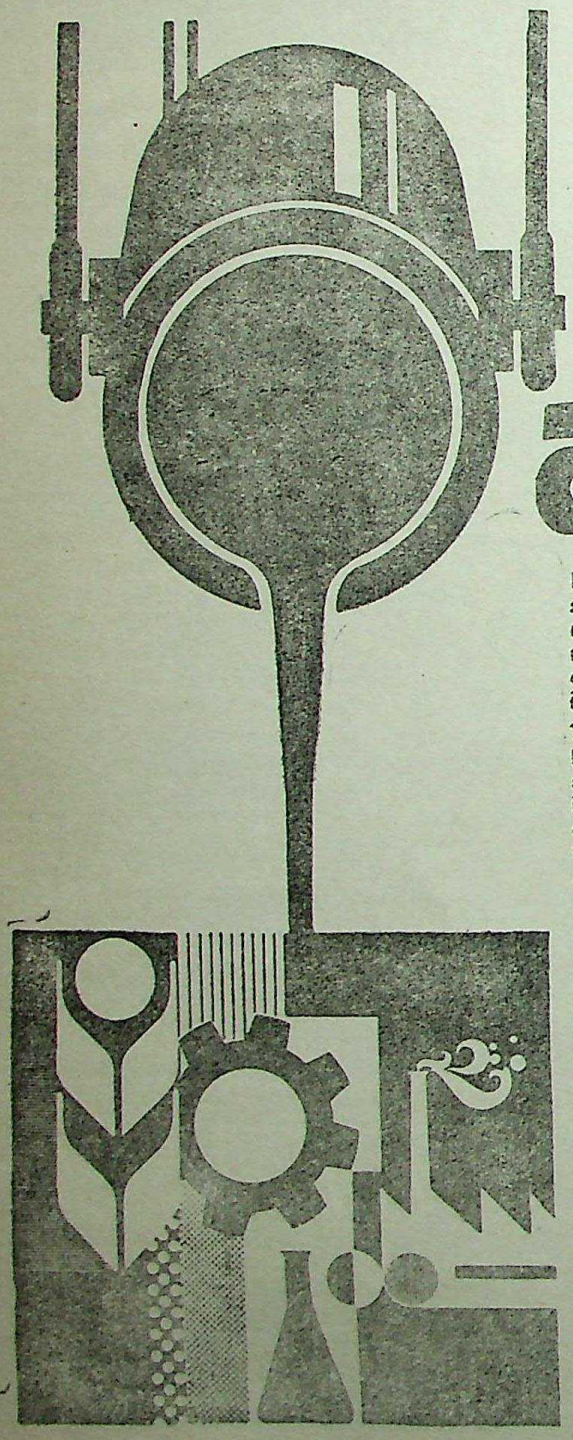
TROIKA PROCESSES PVT. LTD.

607 EMBASSY CENTRE NARIMANPT, BOMBAY-21.
Phone 234429, 234334,234244, 234447
Telex TROK IN 5335

M.O.A

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

NSE shapes steel



steel shapes a nation

NSE is a progressive organization deeply involved in shaping many fascinating shapes in steel. We manufacture textile machinery; forging equipment, re-rolling mills, antennae, EOT Cranes, foundry equipment, machine tools, steel, alloy and grey iron castings.

This wide range of activities has been made possible by a team of technical personnel, trained superbly at our special training cell. Some of these people, imbibing the spirit of adventure found in our organization, have branched off to establish plants of their own, not only inside the country but abroad as well.

Our considerable experience in manufacturing wide and varied industrial equipment has won us Export Awards consistently. It enables us to earn precious foreign exchange by exporting our products to an ever-expanding market abroad. And today we are on the path of earning a fair name for our technological skill by exporting expertise for overseas joint ventures.

NSE

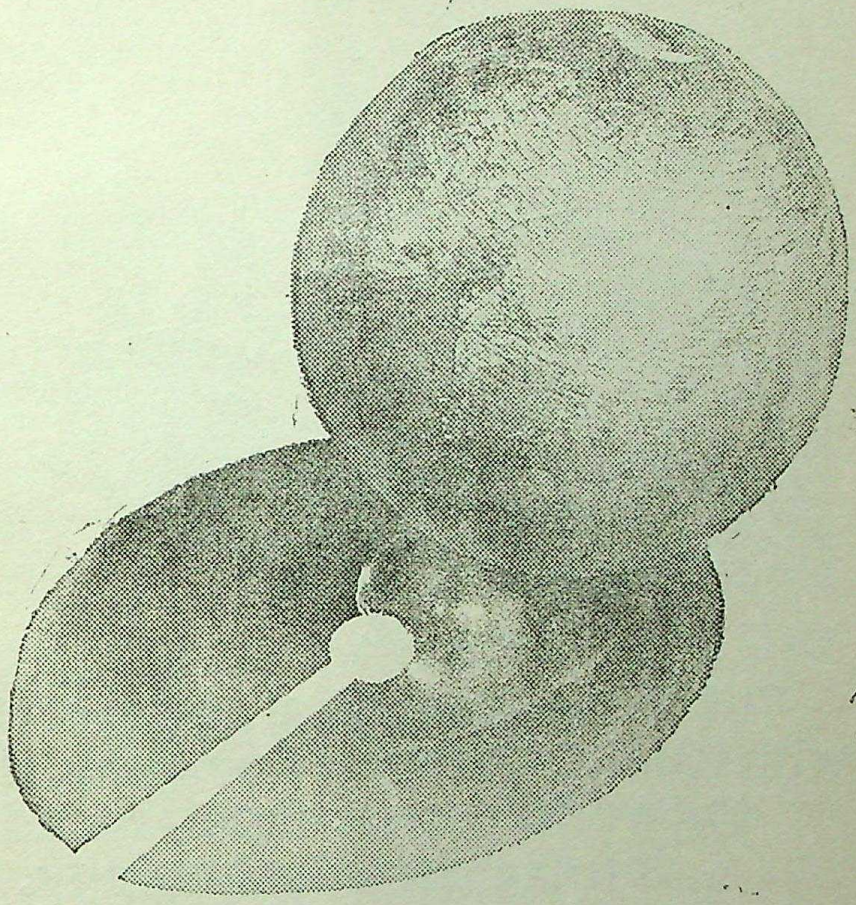
NEW STANDARD ENGINEERING CO.LTD.

NSE Estate, Goregaon East,
BOMBAY-400 063. Telephone 695261.
Grams: "STEELBUILT" Telex: 011-2982.
Regional Office: New Delhi, Calcutta,
Madras & Ahmedabad.

JAISONS

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

India's largest bank has a global image



State Bank of India with its global network of 33 offices in 22 countries spanning all time zones offers a comprehensive range of international banking services covering project loans, financing of joint ventures, participation in syndicated Euro-currency loans and a package for international trade financing. State Bank has acted as Lead Manager and Co-Manager in Euro-currency loans for both domestic and international ventures.

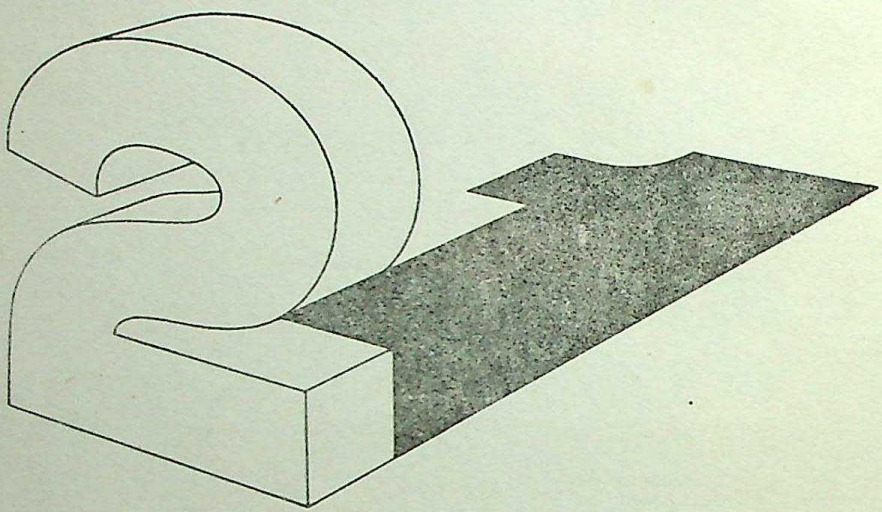
With a 175-year tradition of commercial banking and over 5,200 offices in India, State Bank offers unrivalled banking services to international banks and others wanting to do business in India.

State Bank
Growing worldwide

SB-6174

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

Have you taken a close look at the No.2 in ion exchangers lately?



TULSI has a technical collaboration with IONAC Chemical Company, U.S.A., the world's most experienced in ion exchange technology.

TULSI

Tulsi Fine Chemical Industries (Pvt) Ltd.
1216/7, Shivajinagar, Fergusson College Road,
PUNE 411 004.

Associate Companies: WANSON (India) Limited.
THERMAX (India) Pvt. Ltd.

Isn't it a bit odd being No. 2 when you are already the best?

Rediffusion/TC/1073 b

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

You want the best directions to the USA and Europe.

We've got them.

We can offer you the 17 fastest flights to London every week from Delhi, Calcutta and Bombay. And once you're in London, you can choose from over 1000 flights a week to 80 European cities and 13 cities in the USA and Canada.

Only British Airways can offer you the world on this scale. And look after you every step of the way. That's why we're the world's largest international airline.

British airways

UK INDIA 50 YEARS OF AIR SERVICE

We'll take more care of you.

OBM/4940

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

ICICI

A SOURCE OF CAPITAL FOR INDIAN INDUSTRY

We provide foreign currency loans, rupee loans, guarantees and underwriting assistance and directly subscribe to shares and debentures of industrial undertakings.

In the 25 years of our operations we have sanctioned Rs. 1260 crores to 2615 industrial projects, thereby accelerating India's industrial growth.

THE INDUSTRIAL CREDIT AND INVESTMENT CORPORATION OF INDIA LIMITED

163, Backbay Reclamation, Bombay 400 020

Regional Offices :

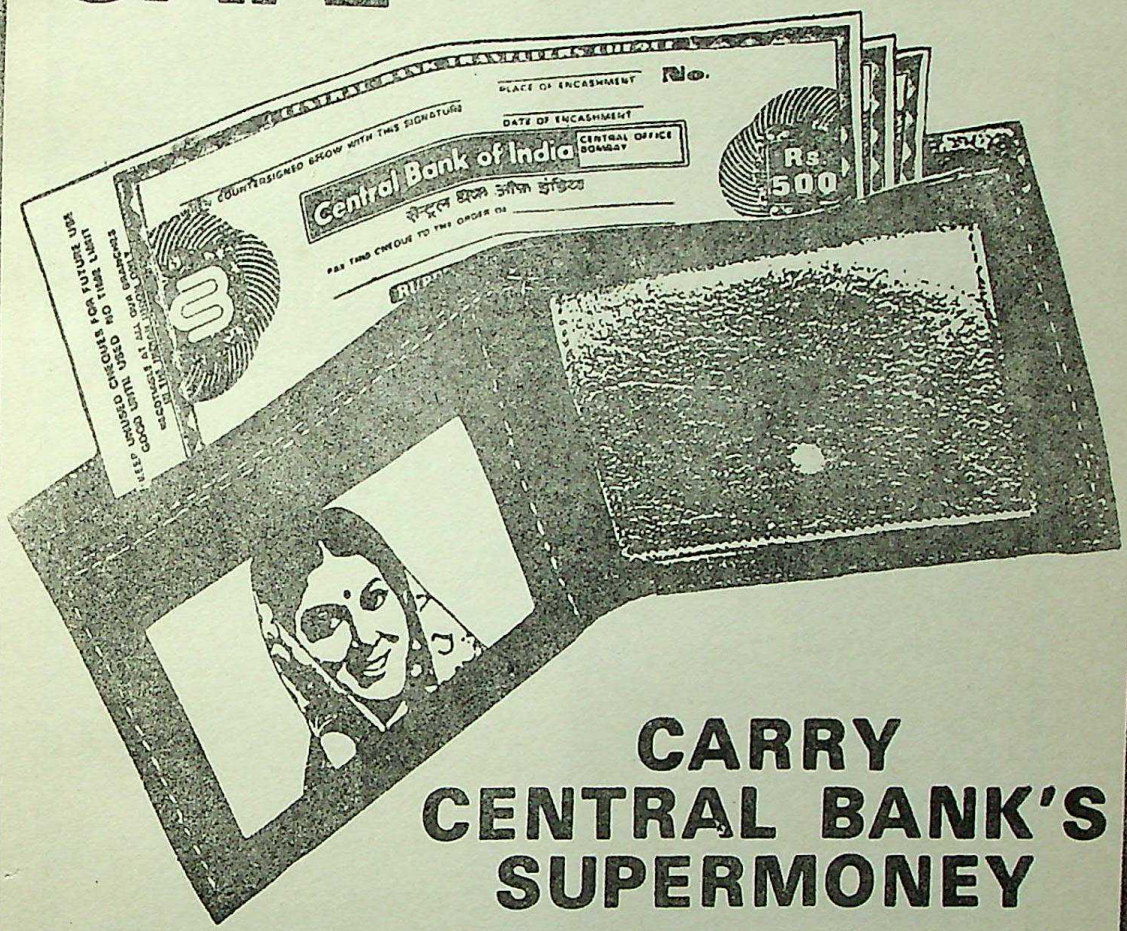
2-B Victoria Terrace, Calcutta 700 017

1 Cenotaph Road, Madras 600 018

18-20 Kasturba Gandhi Marg, New Delhi 110 001

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

PLAY SAFE



CARRY CENTRAL BANK'S SUPERMONEY

TRAVELLERS CHEQUES

Central Bank of India

(A Government of India Undertaking)

The Bank that moves out to people and places

Interpub/CBI/8/78

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

NATIONAL FILM DEVELOPMENT CORPORATION LTD.

(A GOVERNMENT OF INDIA ENTERPRISE)

FINANCING films of quality like AAKROSH, 22ND JUNE 1897, SHODH, ALBERT PINTO, BARA

IMPORTING films from all over the world like THE LACEMAKER, A DREAM OF PASSION THE HUNGARIANS, THE PASSAGE. BETWEEN THE LINES

EXPORTING films from all over India to all parts of the world.

DISTRIBUTING Indian and foreign films in India commercial and non-commercial

EXHIBITING quality films in art theatres.

National Film Development Corporation Ltd.,
13-16 Regent Chambers,
208, Nariman Point,
Bombay 400021

Telephone : 23 18 61

Cable : FILMFINANS

CC-0. Agamnigam Digital Preservation Foundation, Chandigarh

SWINGING SENSATIONS

From APCO

Look stunning in sensational fabrics from APCO.
Shimmering silks, smart cottons and polyester,
Janata sarees and dhoties.
Affordable elegance—that's APCO.

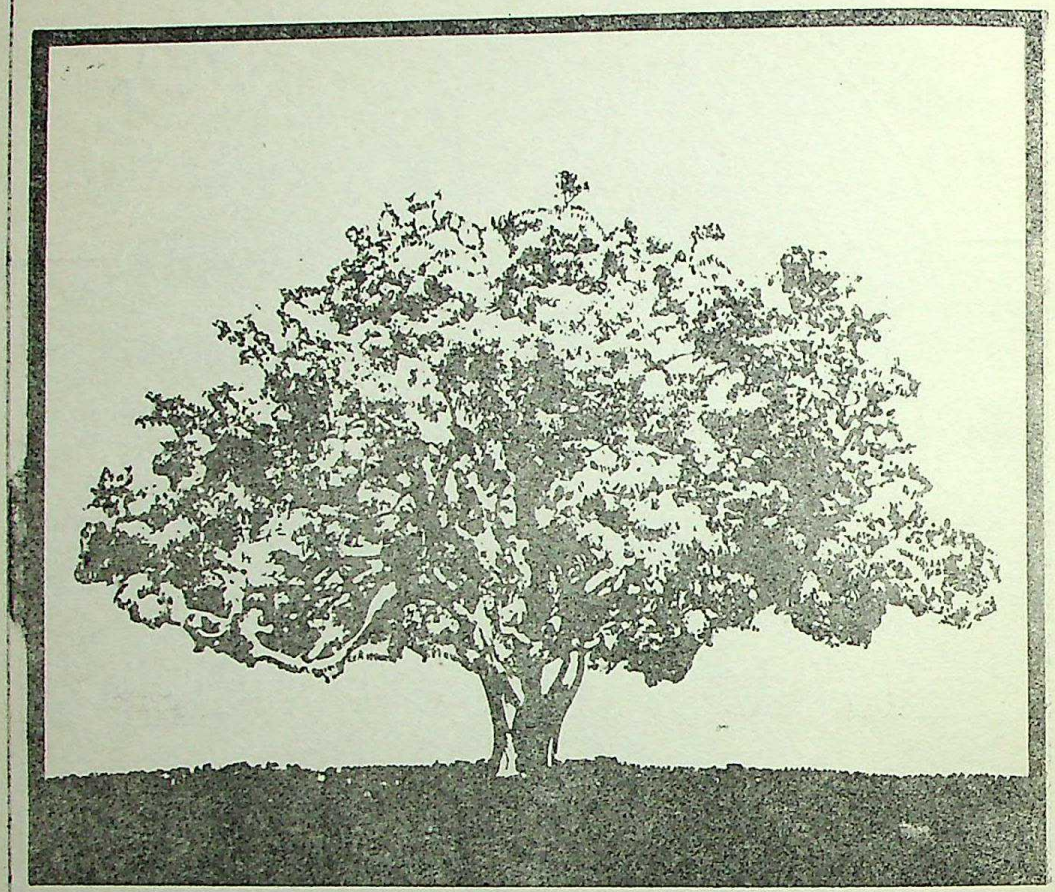
APSHWCSL

Andhra Pradesh State
Handloom Weavers'
Co-operative Society Ltd.
Hyderabad-500 029.

KIRON/APCO/8017

CC-0. Panjab Digital Presevation Foundation, Chandigarh

THE BIGGER THE TREE



the more shade it can give

Canara Bank is growing. Growing fast to serve even more people in even more ways. With over 1,200 branches all over India — some penetrating deep into rural area, some in the heart of cities — we serve two worlds with equal efficiency. The world of big business and industry with expertise in all aspects of finance, trade, marketing and export and the world of little villages where people are still searching for a better way to live.

Poised today on the threshold of rapid growth we are toning up our organisation to peak efficiency. The fifth largest bank in the country and larger tomorrow, the tradition of Canara Bank remains involvement.

CANARA BANK

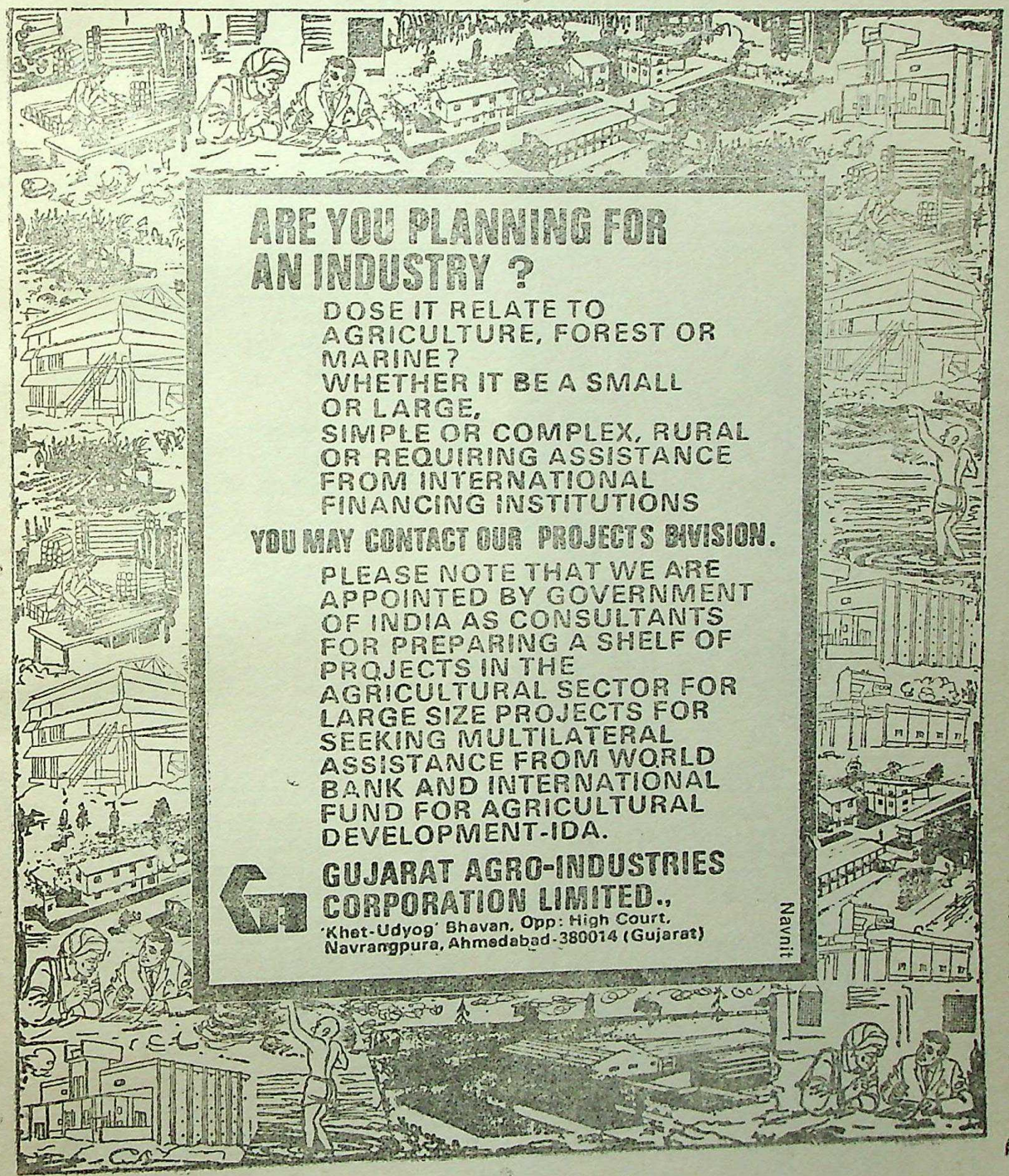
SERVING TO GROW GROWING TO SERVE CANARA BANK

(A nationalised bank)

Over 1,200 branches all over the country.

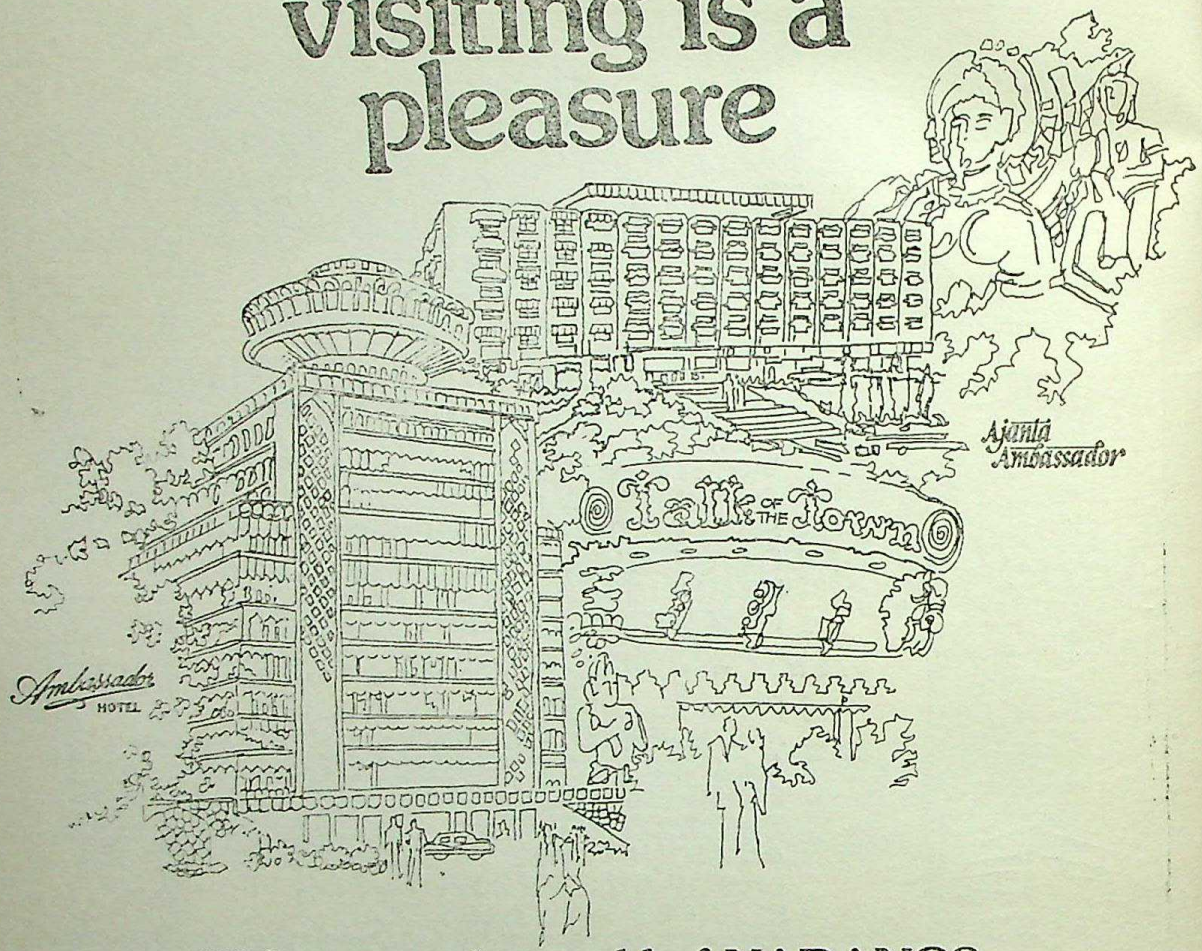
maa CB 141 80

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh



CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

Come to where visiting is a pleasure



Welcome to the world of NARANGS

Ajanta Ambassador is the best Indian theme-based hotel in the country, fashioned to provide you with the maximum of 5 Star Deluxe luxuries. Live life the way you want— we make it possible.

Hotel Ambassador, conveniently located in the very heart of Bombay, is the ideal choice of most businessmen. It is our business to make your business less bothersome.

Some things are always talked about and the talk of this town is "Talk Of The Town", where you can sit in cosy comfort and enjoy the best in food while listening to lively music. It is a place as special as you.

WE TAKE EXTRA CARE OF YOU.

Ajanta Ambassador
Chikalthana,
Aurangabad.
Tel: 8211
Telex: 0745-211.
Telegram: Ambassador.

Ambassador HOTEL
Churchgate Extn,
Bombay 400 020.
Tel: 291131.
Telex: 011-2918
Telegram: Embassy

Talk of the Town
Marine Drive,
Bombay 400 020.
Tel: 220883.

A helping hand from New Bank for weaker sections.

NEW BANK extends its helpful hand to the weaker sections of Society—farmers, landless labourers, artisans and self-employed persons. If you are engaged in some useful vocation and need finance, come to us. We will do our best to enable you to stand on your own feet and contribute your mite to the prosperity of the nation.

Contact your nearest branch.

NEW BANK OF INDIA

(A Government of India undertaking)

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

THE GREAVES EXPERT

A dynamic force in the nation's industrial progress

In vital sectors of industry. In Agriculture and Fishing. In Oil exploration. Mining, Aviation, Electronics, Defence. In Steel and Shipbuilding. Covering a broad spectrum of activities—engineering, manufacturing, marketing.

Greaves are totally involved in India's industrial progress. Bringing the finest technology and equipment to Indian industry as concessionaires for internationally and nationally famous manufacturers.

Greaves' various plants and production units manufacture top quality diesel engines, gensets, gearboxes, oilfield bits, rockroller bits, fluid couplings, foundry fluxes, etc., to keep up the pace of industrial growth.

Over the decades, Greaves' professionals have built up a solid reputation for technical and marketing skills. With a country-wide network of branches, after-sales service centres and dealer outlets to back their operations. So that Greaves' experts are available where they are needed most.

GREAVES COTTON & CO. LTD. GREAVES 1, Dr. V.B. Gandhi Marg, Bombay 400 023

Alfred Allan-1410

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

CC-0. Jangamwadi Math Digital Preservation Foundation, Chandigarh

Agricultural Finance Corporation Limited

******

EXTENDS PROJECT CONSULTANCY SERVICES

TO

COMMERCIAL BANKS ** STATE GOVERNMENTS

INSTITUTIONS ** INDIVIDUALS

WORLD BANK * ASIAN DEVELOPMENT BANK

FOOD AND AGRICULTURAL ORGANISATION

FOR

TECHNO-ECONOMIC SURVEYS & PROJECT

FORMULATION IN BACKWARD AREAS FOR

AGRICULTURAL & RURAL DEVELOPMENT

**

PROJECT INVESTMENT SURVEYS FOR WEAKER SECTIONS

**

PROJECT FORMULATION, ANALYSIS & EVALUATION

IN AGRICULTURE, FORESTRY, HORTICULTURE,

AGRO-INDUSTRIES, DAIRY &

LIVESTOCK PROJECTS

*

V. M. BHIDE
CHAIRMAN

GHULAM GHOUSE
MANAGING DIRECTOR

REGISTERED OFFICE

DHANRAJ MAHAL
C. S. M. MARG

BOMBAY 400 039

REGIONAL OFFICES
EASTERN REGION :
CALCUTTA

NORTHERN REGION :
LUCKNOW

BRANCH OFFICES : PATNA, KOTA, SHILLONG, SURAT

Telephone : 242924

Telex 5849 AFC

CC-0. Agamnigam Digital Preservation Foundation ,Chandigarh

YOUR CARGO IN OUR CONTAINER CARE!

TO: U.S.A. – CANADA, U.K. – CONTINENT, U.S.S.R, MEDITERRANEAN PORTS, JAPAN, AUSTRALIA.

Our fast modern container oriented cargo liners, carry your cargo safely and securely in containers for ship shape delivery at destination ports.

For details please contact:

The Shipping Corporation Of India Ltd.

SHIPPING HOUSE, MADAME CAMA ROAD, BOMBAY-400 021
• PHONE 232666 • TELEX: 011-2314/2766

Offices at Calcutta & New Delhi.
Overseas offices at London & Mombasa.
Agents at all principal ports of the world.

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

TUTICORIN PORT BREAKS NEW GROUND, CREATES NEW HISTORY !

Tuticorin the youngest Indian Major Port, is now the container transhipment centre between Ports in the Far West and Far East chosen by shipping lines of international repute. Because it has an Energetic Dynamic, Modern and Sophisticated outlook and style.

The shippers, admit that the vessels whether small or big, whether loaded with Bulk or General Cargo, with coal or oil, cement or sugar, either in alongside berths or in midstream turnround in an amazingly short period of time ! Because, it possesses a duty conscious, self-disciplined, peace-loving and untiring labour force; a variety of cargo handling equipments reflecting the latest technology and sophistication; a team of well experienced, devoted and dedicated officers and staff committed to the goal of Port Development. No wonder that the cargo traffic has gone up from a mere 2.7 lakh tonnes in 1975-76 to an unbelievable figure of 24.10 lakh tonnes in 1979-80, registering a substantial increase of 43% over previous year's traffic.

Indeed a giant stride ahead ! But this achievement by no means, is a justification for complacency.

A new modern oil jetty will be bustling with activity in a few days. A mighty coal jetty getting ready to smile at the dancing waves by early next year. More high-powered tugs and locos are being procured to strengthen the existing fleet of Port crafts and equipments. Additional alongside berths and warehouses have already been planned. Deep-draughted vessels upto 30 feet draught will soon find their berths at alongside wharf. The passenger service between Tuticorin and Colombo is planned to commence by early 1981.— yet another colourful feather to its cap !

Tuticorin Port Trust
Tuticorin 628 004.
Phone No. 21790. Grams : PORTRUST Telex : 0444-243.

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

PRODUCE PRESERVE PROSPER

With a network of over 1300 Central and State Warehouses in the country, we have an answer for all your storage problems.

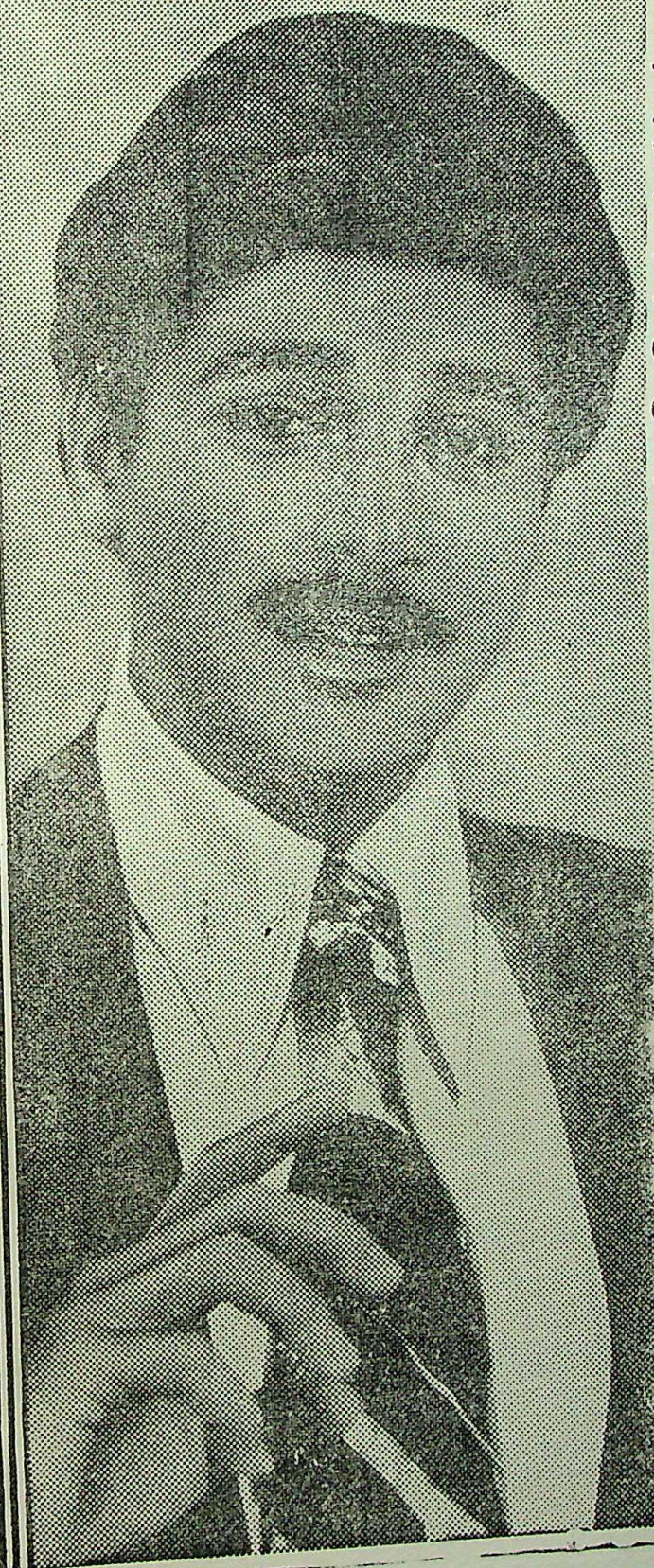
You can reduce your handling, Warehouse and distribution costs by entrusting us with all your problems relating to :

* **STORAGE**
* **HANDLING AND TRANSPORT TO AND FROM THE WAREHOUSE**
* **SALE AND DISTRIBUTION**
* **PRESERVATION OF AGRICULTURAL PRODUCE, HYGROSCOPIC AND DELICATE COMMODITIES**
* **BONDED WAREHOUSING FACILITIES FOR DUTIABLE AND EXCISABLE COMMODITIES**
* **IMPORT AND EXPORT GOODS WAREHOUSING**
* **DISINFESTATION OF AGRICULTURAL PRODUCE, FACTORIES, CONTAINERS, PREMISES AND CARRIERS.**
* **PRE-SHIPMENT FUMIGATION**

you can avail of credit facilities from scheduled banks on security of Warehouse Receipt.

CENTRAL WAREHOUSING CORPORATION
(A GOVERNMENT OF INDIA UNDERTAKING)
"WAREHOUSING BHAWAN"
4/1, SIRI INSTITUTIONAL AREA,
HAUZ KHAS, NEW DELHI-110016.

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh



PNB has shown me how to earn extra income every month

With my growing expenses, I was finding it difficult to make both ends meet. So, I deposited my bonus in PNB's **Special Fixed Deposit.**

Now I get a regular amount as interest every month. With this amount I am able to pay for a few things I need.

Rs. 30,000 deposited for 63 months will fetch the depositor Rs. 247.92 every month as interest. The principal remains intact.

You can deposit a minimum of Rs. 500/-

Interest for 12/36 months deposit 7% p.a.

Interest for 39/60 months deposit 8.5% p.a.

Interest for 63/120 months deposit 10% p.a.

punjab national bank
(A Government of India Undertaking)
—the name you can BANK upon !

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

SHARE A LAMP

SAVE AN AMP

SAVE POWER FOR NATIONAL PRODUCTIVITY

THE TATA ELECTRIC COMPANIES

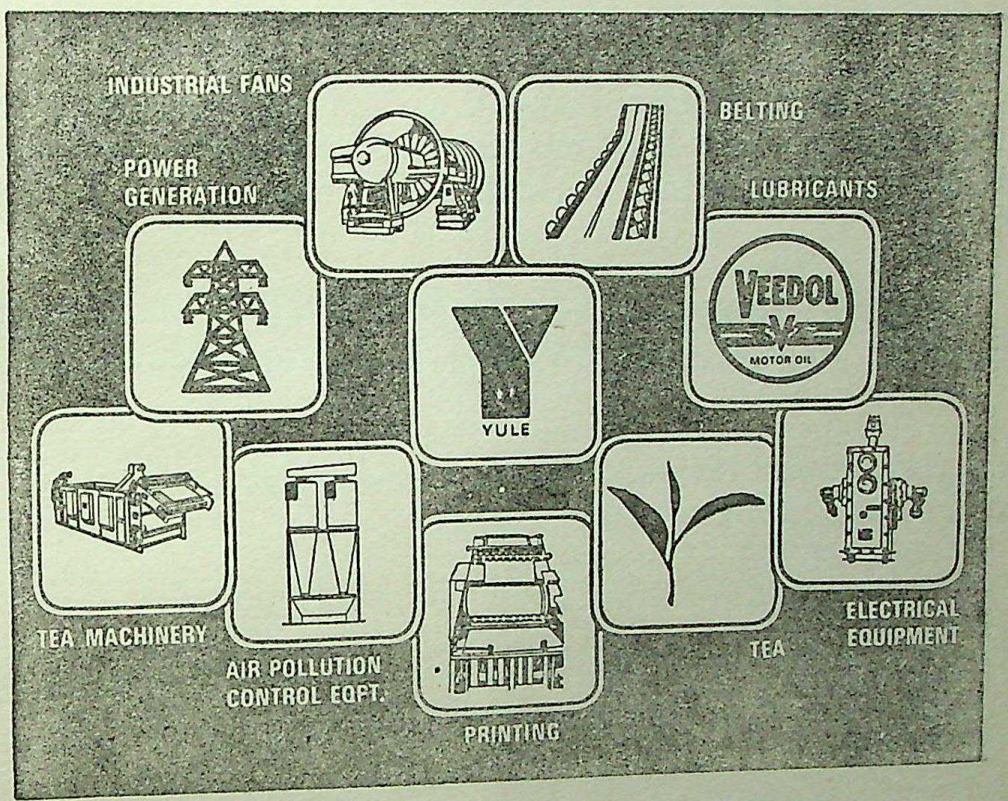
THE TATA CONSULTING ENGINEERS

Registered Office:

BOMBAY HOUSE
HOMI MODY STREET
BOMBAY 400023

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

The new face of YULE



The Yule group has diversified extensively into high technology products to accelerate the economic growth of the country. A wide range of industrial engineering products, conveyor belting, lubricants, as also power and tea of the highest quality are produced by Yule in the service of the nation.

ANDREW YULE & CO. LTD.

YULE

Yule House
8, Clive Row, Calcutta-700 001
Branches : Bombay, Delhi, Madras

FDS/AY115R1

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

UNIT TRUST offers 4 safe ways that make your savings grow.

Unit Scheme 1964—Steadily growing dividend. Ready encashability.

Unit Linked Insurance Plan—A savings plan combining life insurance cover with high returns. Plus, you get tax rebate as in the case of Provident Fund and LIC premium.

Children's Gift Plan—For a child you love. His very own investment to grow up with. And he can win a large prize too.

Reinvestment Plan—Automatic reinvestment of dividend in more units. At the special offer price.

UNIT TRUST OF INDIA

For further information, please contact our nearest office :

*13, Sir Vithaldas Thackersey Marg, Bombay-400 020,

*4, Fairlie Place, Calcutta—700 001,

*Regina Mansion, 46, Second line Beach, Madras—600 001

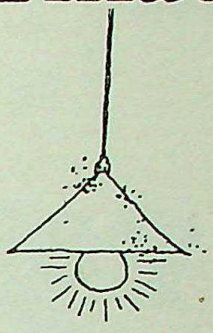
*Gulab Bhawan (Rear Block) 2nd Floor,

6, Bahadur Shah Zafar Marg, New Delhi-110 002

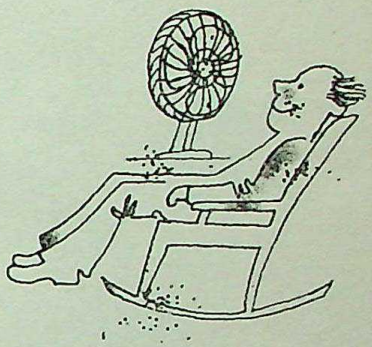
CC-0. Agamnigam Digital Preservation Foundation, Chandigarh

The transformation

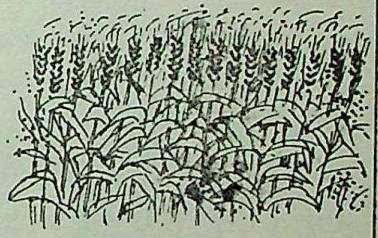
From darkness into light...

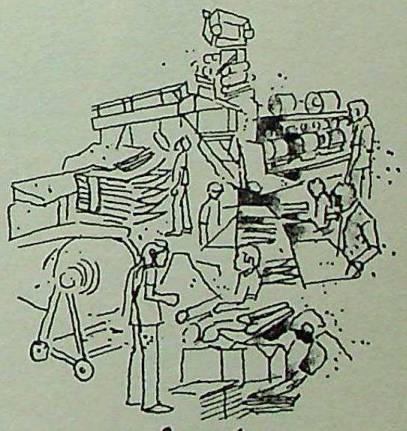


from unbearable heat into cool comfort...



arid acres into fertile land...



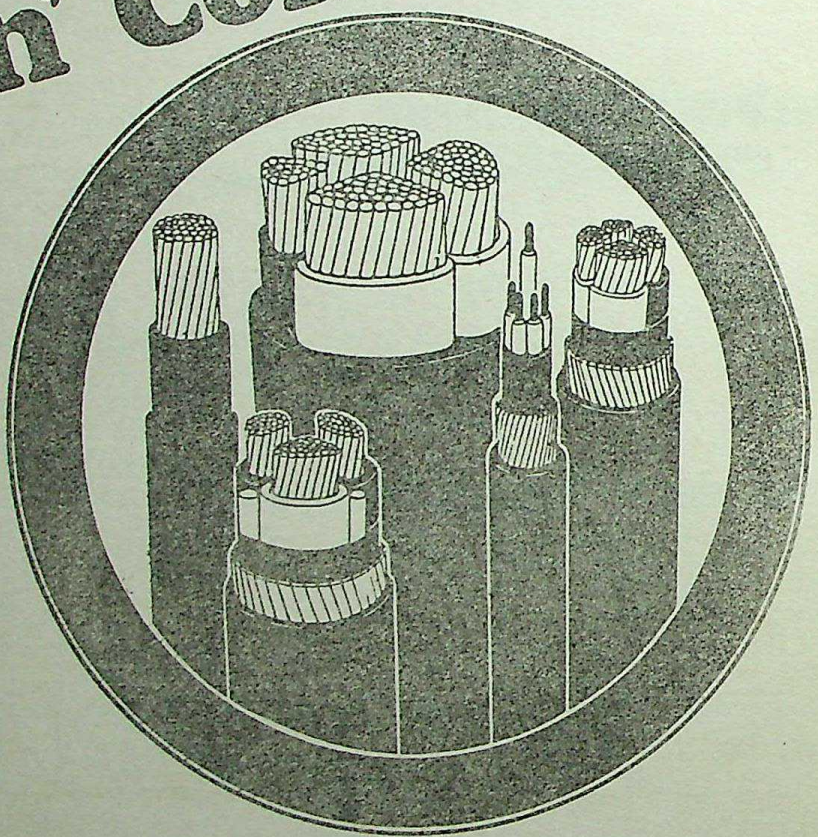


desolate land into humming project...

Crompton Greaves LIMITED

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

Power Contained 'n' Conducted



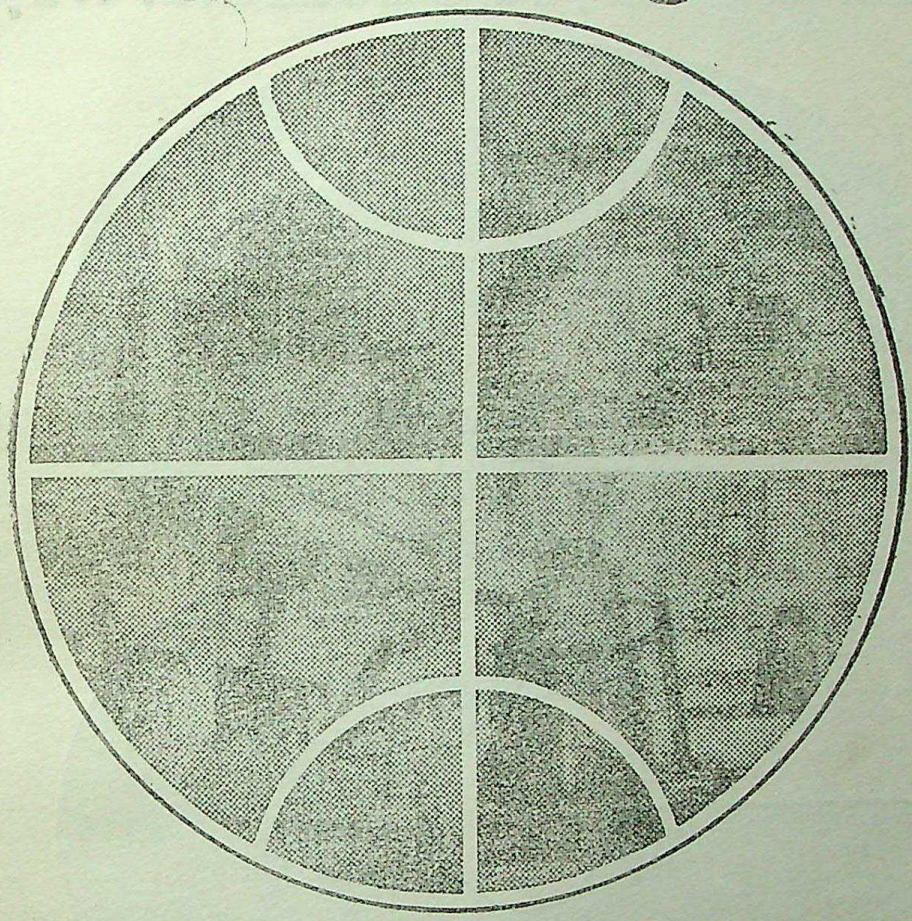
PANPUB/7914

THE PREMIER CABLE COMPANY LTD.

Regd. Office & Works : Karukutty Ernakulam Distt. KERALA Gram : Premcable
Phone : 234 Angamally Telex : 272 CN
H.O. : 14/15F, Connaught Place, New Delhi-110001 Gram : Premcable
Telex : 2650 ND & 3398 ND Phones : 45023, 44547, 40769
Central Sales and Project Office : C-1, Community Centre, Safdarjung Development Area, New Delhi-110016 Phones : 654425, 665301 Telex : 3398
Branches : Bombay Ph : 381990, Madras Ph : 24092, 25578
Calcutta, 443127 432850

CC-0, Agamnigam Digital Presevation Foundation, Chandigarh

What in the world of power can we do for you?



Whatever your need in the world of power, all you need is to call BHEL—Bharat Heavy Electricals Limited. One of the top ten power plant equipment manufacturers in the world, BHEL offers the widest spectrum of products and services for power generation, transmission and utilisation—all under one roof ! Incorporating the latest technology in the field.

In thermal power, BHEL manufactures Boilers and Turbosets up to 500 MW; Transformers, Switchgear and Capacitors up to 400 kV. In hydel power, it manufactures power equipment for Francis, Kaplan and Pelton type turbines as well as reversible pump turbines.

BHEL offers these not just as individual equipment, but as a 'total turnkey capability' in power systems. A capability that's backed by a staff strength of over 60,000 people including nearly 9,000 trained engineers.

BHEL—in the world of industry

BHEL also offers a wide range of industrial equipment—including compressors, industrial turbosets, large electrical motors and controlgear, pumps, traction equipment and heat exchangers. It undertakes systems engineering; design of control schematics, erection and commissioning of such equipment. Serving major industries like Cement, Steel, Mining, Paper, Fertiliser, Petroleum, Petrochemicals, Railways and more.

more than products, a total service for energy

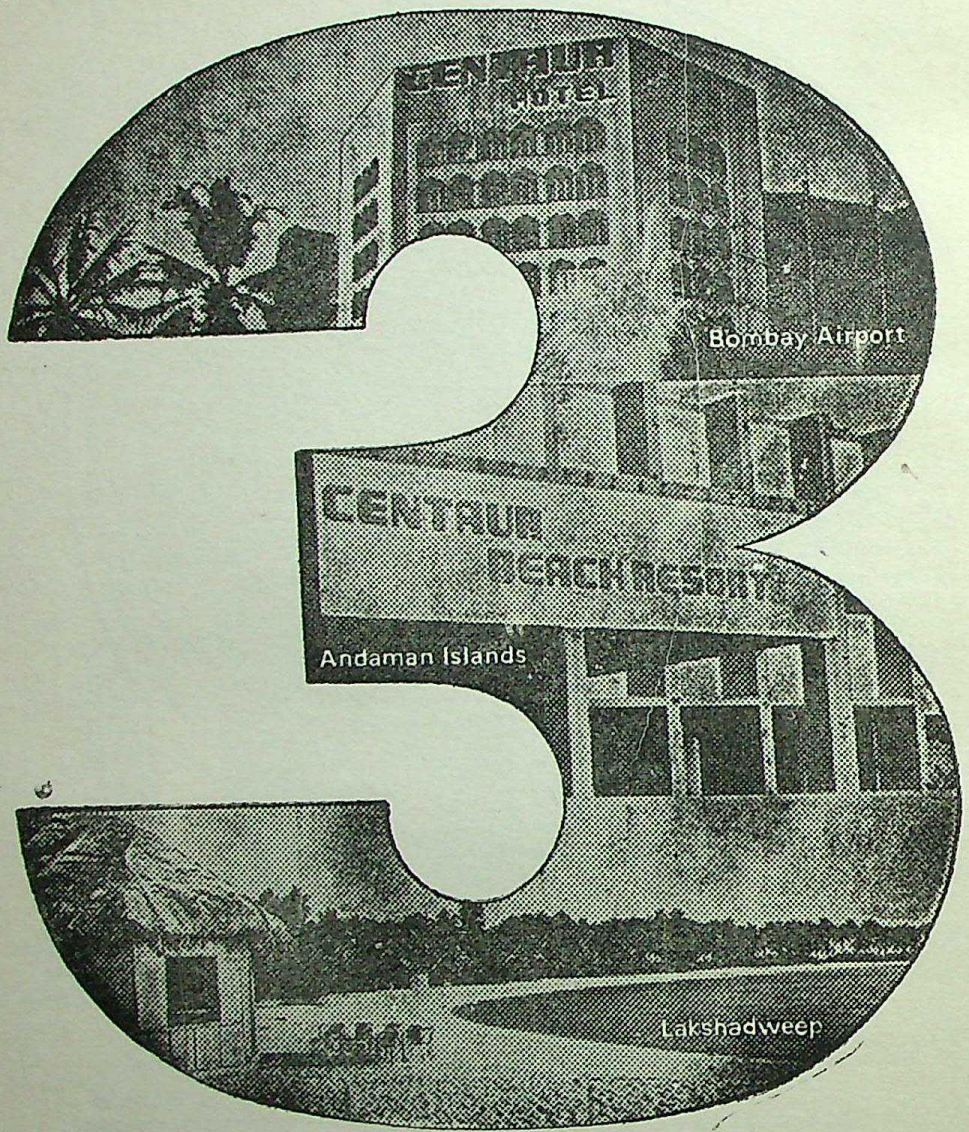
Bharat Heavy Electricals Limited

18-20 Kasturba Gandhi Marg New Delhi 110 001-INDIA

AA/BHEL/1482

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

Mix a little pleasure with business Centaur shows you 3 beautiful ways



Centaur Hotel — Bombay Airport: Close to Juhu Beach. Powai Lake. The Chembur Golf Course.

Centaur Beach Resort— Andaman Islands: Contemporary luxury on an island nestling in the turquoise blue waters of the Bay of Bengal.

Centaur Beach Resort— Lakshadweep: A rustic holiday resort on an island tucked away in the sapphire blue waters of the Arabian Sea.

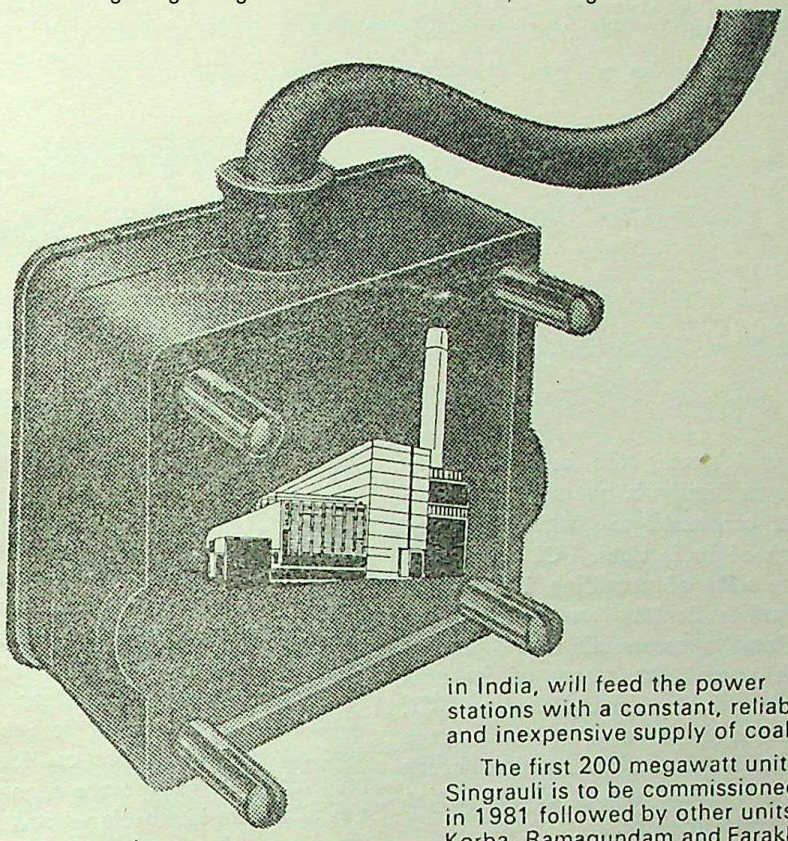
Opening 1981: Centaur Beach Hotel, Juhu, Bombay; Centaur Lake View Hotel, Srinagar, attached to the Jammu & Kashmir Convention Complex.

Hotel Corporation of India
(a wholly owned subsidiary of AIR-INDIA)
Centaur Hotel, Bombay Airport, Bombay 400 057

For reservations, contact the nearest AIR-INDIA office.

Shilpi hol 12/79

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh



A four-point programme from NTPC...

for power that's as reliable as it's economical

The men at NTPC are right now building super thermal power stations at four 'power points'— Singrauli in Uttar Pradesh, Korba in Madhya Pradesh, Ramagundam in Andhra Pradesh and Farakka in West Bengal.

Once commissioned, these power stations will meet a significant part of the power needs of the country : through a 5000 km, 400 kV transmission network, also to be built by NTPC.

A unique feature of these projects is that all of them are being built very near coalfields. A 'merry-go-round' railway system, tried for the first time in India, will feed the power stations with a constant, reliable and inexpensive supply of coal.

The first 200 megawatt unit at Singrauli is to be commissioned in 1981 followed by other units at Korba, Ramagundam and Farakka. By 1987, NTPC would be operating all the four power stations (in addition to Badarpur thermal power station in Delhi) with a total generating capacity of 8020 megawatts.

Admittedly, it's an enormous task. And at NTPC, we've evolved our own integrated project management system to meet our prime objective : to commission our power stations on time. With the best in equipment and with the least cost over-runs.

To generate power that's as reliable as it's economical.

A NATIONAL CONCERN FOR MORE POWER

NTPC

National Thermal Power Corporation Ltd.

(A Government of India Enterprise)

Kailash Building
Kasturba Gandhi Marg
New Delhi 110 001

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

You who worry about one family's rice and dal

imagine being responsible for the rations of 130 million families

Checking and storing the best of rations for your own family is not such an enormous task, compared to what the Food Corporation of India does. FCI undertakes the responsibility of providing 130 million Indian families healthy and edible foodgrains. Families spread all over this vast land, each spared the worry of its next regular supply of rations. Because FCI, with its massive transportation, storage and distribution operations, assures every consumer a constant supply of foodgrains at a fixed and fair price.

The Food Subsidy is For You

FCI provides foodgrains at a price much lower than actual costs. Expenses are incurred at every stage of operations, from procurement to final distribution. For instance, FCI pays the farmer a procurement price of Rs. 117.00 per quintal of of Grade I wheat. Over and above this, statutory and other compulsory charges like mandi fee, mandi labour, local transportation, purchase tax and cost of gunny bags paid by FCI amount to Rs. 20.64. This is within the mandi itself. Additional expenses of storage, transportation, interest on loans and administrative overheads amount to Rs. 23.41 resulting in a total cost of Rs. 161.05 per quintal to FCI. But the selling price to distributing agencies of various states is maintained at Rs. 130.00. The difference of Rs. 31.5 per quintal is met by the Government. This is the consumer subsidy, provided by the Government and channelised through FCI.

The Grain is Greater Than the Loss

Many lakh tonnes of foodgrains are handled by FCI while procuring at the mandi, weighing, grading, storing, transporting and finally distributing. This naturally results in a certain amount of spillage, for most of these complex operations are handled manually. There still exists a certain amount of dependence on temporary storage methods. These are open to the vagaries of nature like cyclones and rains, which may result in some loss. Yet losses have only been around 1%. FCI is constantly trying to minimise losses, by improving and increasing storage facilities.

The Cost of Feeding a Nation

Inspite of having to feed 130 million families, the expenses incurred by FCI in the handling of foodgrains are a mere 17% of acquisition cost. The bulk of this is incurred towards movement of foodgrains and interest on loans from banks. For all these various operations, what is spent on administrative overheads is only around 1% of the total cost.

Any operation as extensive and complex as FCI's will find itself faced with a number of problems. But the Corporation's constant endeavours are directed towards surmounting these problems and solving them in the best interest of the people.

FOOD CORPORATION OF INDIA

In the service of the nation

CC-0. Agamnigam Digital Preservation Foundation, Chandigarh

ANDAMANS, where the National tri-colour was first unfurled is A TOURIST PARADISE now ;

Sanctified by the martyrdom of hundreds of freedom fighters, the Islands are now a place of pilgrimage with the declaration of the Cellular Jail as a National Memorial.

The Islands, rich with natural resources and scenic splendour, are a resort for those who seek solace and comfort in the lap of Mother Earth.

To a student of Anthropology, the vivid tribal life is an experience in itself.

The flora and fauna of these islands and the marine life are all unique in character.

Though dormant, Narcondum and Barren Island are the only two volcanoes known in the whole of India ;

The tropical forest, serpentine creeks, palm fringed sandy beaches, the marine and avian fauna and the beautiful climate, tempered with gentle sea breeze are all tempting invitations for young and old to visit the Islands for fun and relaxation.

Come alone or come in groups.

For further details please contact :—

Public Relations Officer,
F—105 Curzon Road Hostel,
Andaman Tourist Bureau,
Kasturba Gandhi Marg
Tel. 387015
New Delhi—110001.

PUBLICITY OFFICER
ANDAMAN & NICOBAR ADMINISTRATION
PORT BLAIR.

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

ONLY HUNDRED DAYS OF U. P. GOVERNMENT AND ACHIEVEMENTS

Notwithstanding various problems like drought, floods, paucity of resources etc, the State Government has been able to achieve spectacular success during the one hundred days of administration. It presents a glimpse of efforts as to how the Government is pursuing the policy of socio-economic progress of the State.

- **Rs. 934 crores for the annual plan—highest ever increase in the plan outlay for a single year.**
- **Rs. 86 crores—an outlay for the hill development.**
- **Rs. 119 crores for welfare of Scheduled Castes and persons of weaker sections—four-fold increase from the preceding year.**
- **Tackling the flood situation on war-footing, Rs. 12 crores for flood affected, approved Central assistance to the tune of Rs. 35.10 crores.**
- **Relentless efforts for efficient administration, drive against economic offenders. Sugar, fertilizers, steel etc. worth Rs. 2 crores seized.**
- **Reorganisation of power generation and distribution—setting up of Uttar Pradesh Rajya Vidyut Utpadan Company.**
- **Rs. 250 crores earmarked for cooperative loans to 80 lakh farmers.**
- **Setting up of four fertilizer plants initiated by the Central Government with an estimated cost of Rs. 1600 crores. Two cooperative spinning mills at a cost of Rs. 32 crores by the State.**
- **6000 Urdu teachers made permanent.**
- **Illegally grabbed land restored to landless allottees. About 30,000 persons benefited.**
- **Workers' participation in Government undertakings and corporations enforced.**

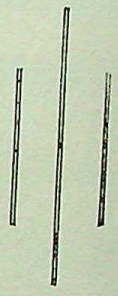
It marks the beginning
Happier days are ahead

Issued by Information and Public Relations Department, Uttar Pradesh

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

ANDAMAN AND NICOBAR ISLANDS FOREST & PLANTATION DEVELOPMENT CORPORATION LTD, PORT BLAIR

(A GOVERNMENT OF INDIA UNDERTAKING)



Presently Engaged in :—

(i) Conservation and optimum utilisation of Forest Resources of the Islands

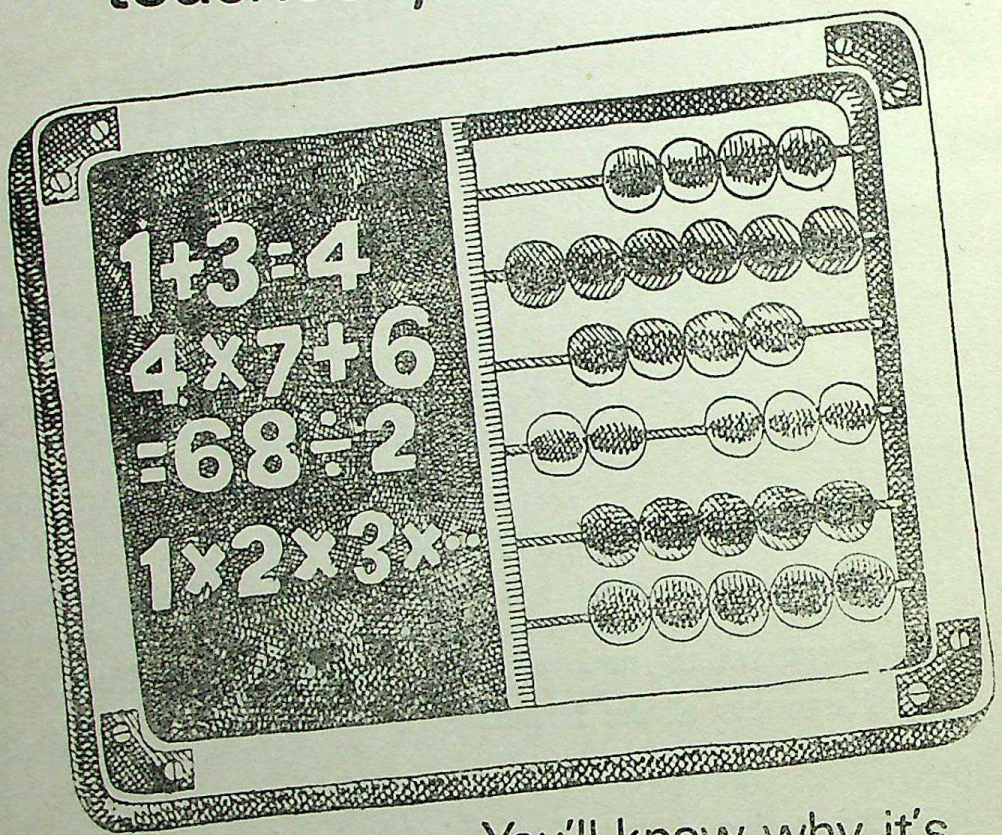
(ii) Promoting forest based industries in the project areas.

(iii) Raising plantations of commercial crops of Red Oil Palm, Rubber and Spices

Invite entrepreneurs for setting up forest and plantation based industries both in the private and joint sector.

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

Before you go to bed tonight, count how many times steel has touched your life today



You'll know why it's called the economic multiplier

Right from kitchen utensils in which you prepare your morning tea, blades you shave with, transport you commute in, furniture you use, the watch you wear, —steel touches your everyday life in a hundred different ways.
Not just in cities. But in villages too. Where ploughs, pump sets, threshers, bullock cart axles, trucks, tractors, are all made of steel. And the list goes on

As the vital core metal that steers the nation's economy, steel means progress of the country. It ensures employment and prosperity. In industry, agriculture, transport, defence, energy, human life and welfare.

SAIL understands this. And strives to fulfil the nation's need for steel

STEEL AUTHORITY OF INDIA LTD.
Giving strength and solidity to the Nation's aspirations.

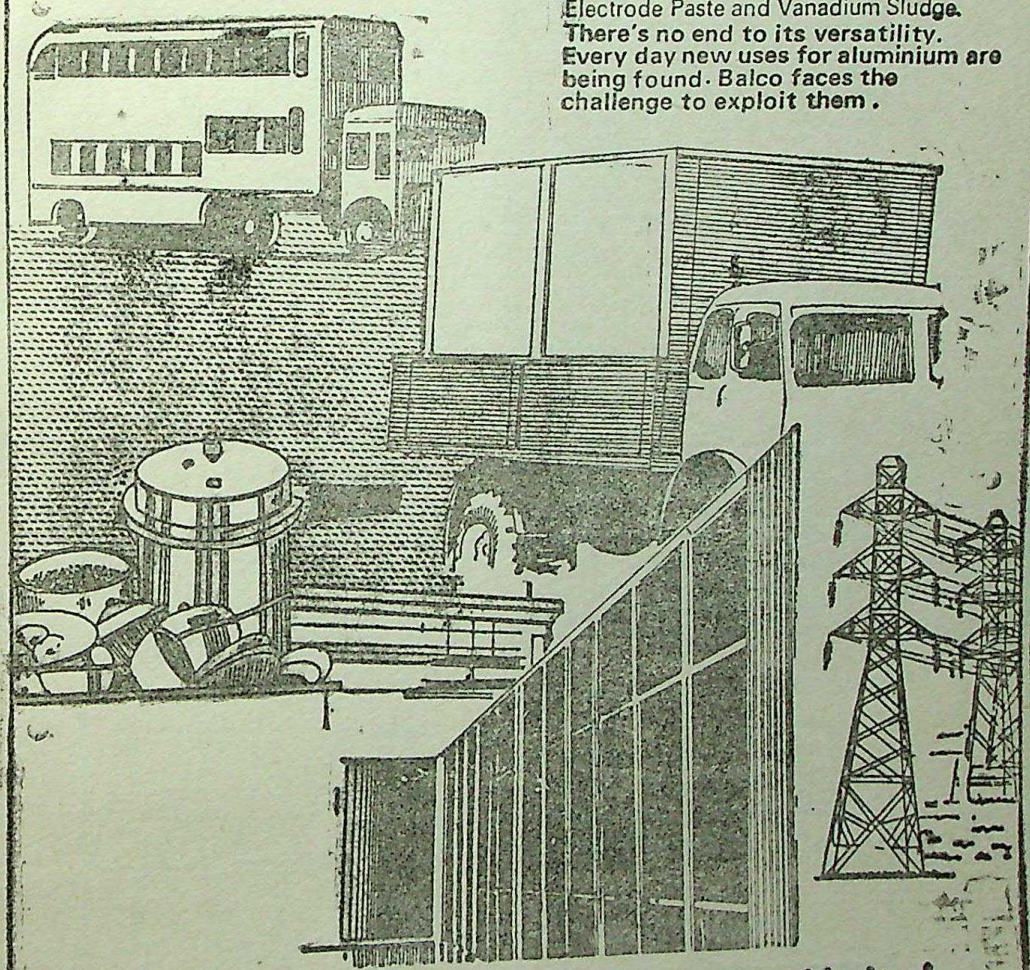
CC-0. Agamnigam Digital Preservation Foundation, Chandigarh

Our Light weight Champion is doing wonders !

Aluminium. The most versatile metal produced by man. Light as paper, tough as steel. It can be put to a thousand uses—in household articles, architecture, transport, electronic and electrical products. This light-weight metal is a perennial source of research—for a myriad applications.

Bharat Aluminium Company's works at Korba is producing a variety of products Electrical & Commercial Grade Aluminium Ingots, Properzi Rods, Billets, Alloy Ingots and Extruded Sections. Soon it will commence marketing rolled products also. Other products in its range of sale are Alumina Hydrate, Calcined Alumina, Carbon Electrode Paste and Vanadium Sludge.

There's no end to its versatility. Every day new uses for aluminium are being found. Balco faces the challenge to exploit them.



Bharat Aluminium Company Limited

(A Government of India Undertaking)
Registered Office : Punj House, 18, Nehru Place, New Delhi-110 019

INTERADS

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

Yes, we are different things to different people, because our activities are so diversified. We, however chose to restrict ourselves only to high-technology product lines, and to manufacturers, Indian and foreign, who are acknowledged leaders in their own fields.

Each product line calls for specialised skills on our part. That's why each af our nine Divisions are manned by some of the finest talents in their respective fields, further developed through training and experience.

So to all of you, no matter which of our activities you may be exposed to, we strive to be just one thing: the high-technology company which offers products of only the highest quality, and backs them with a team of highly specialised experts.

That's us. Full face.

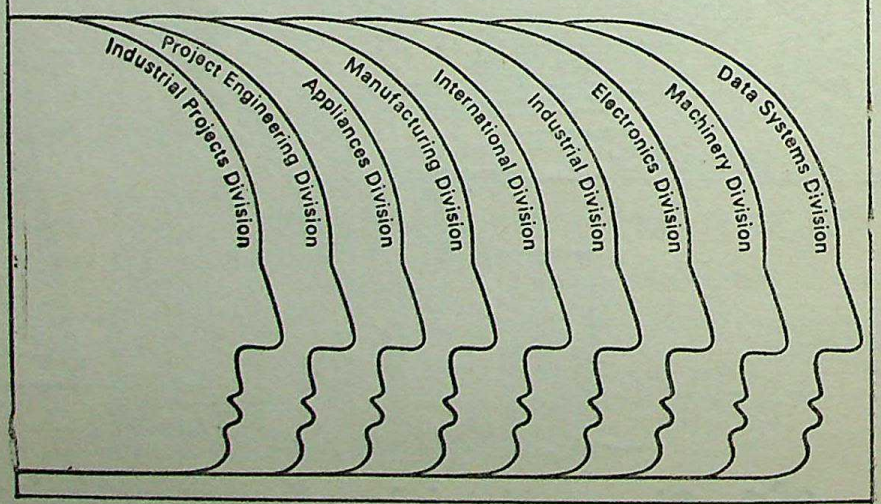
Blue Star.

No matter which of our profiles you may be exposed to they all add up to this:

BLUE STAR ©

the high-technology company

Bombay • Calcutta • New Delhi • Madras • Pune • Ahmedabad • Vadodara
Indore • Jamshedpur • Gauhati • Chandigarh • Bangalore • Cochin
Trivandrum • Secunderabad • Visakhapatnam • Vijayawada



CC-0. Agamnigam Digital Preservation Foundation, Chandigarh

For bumper harvests...bigger profits=

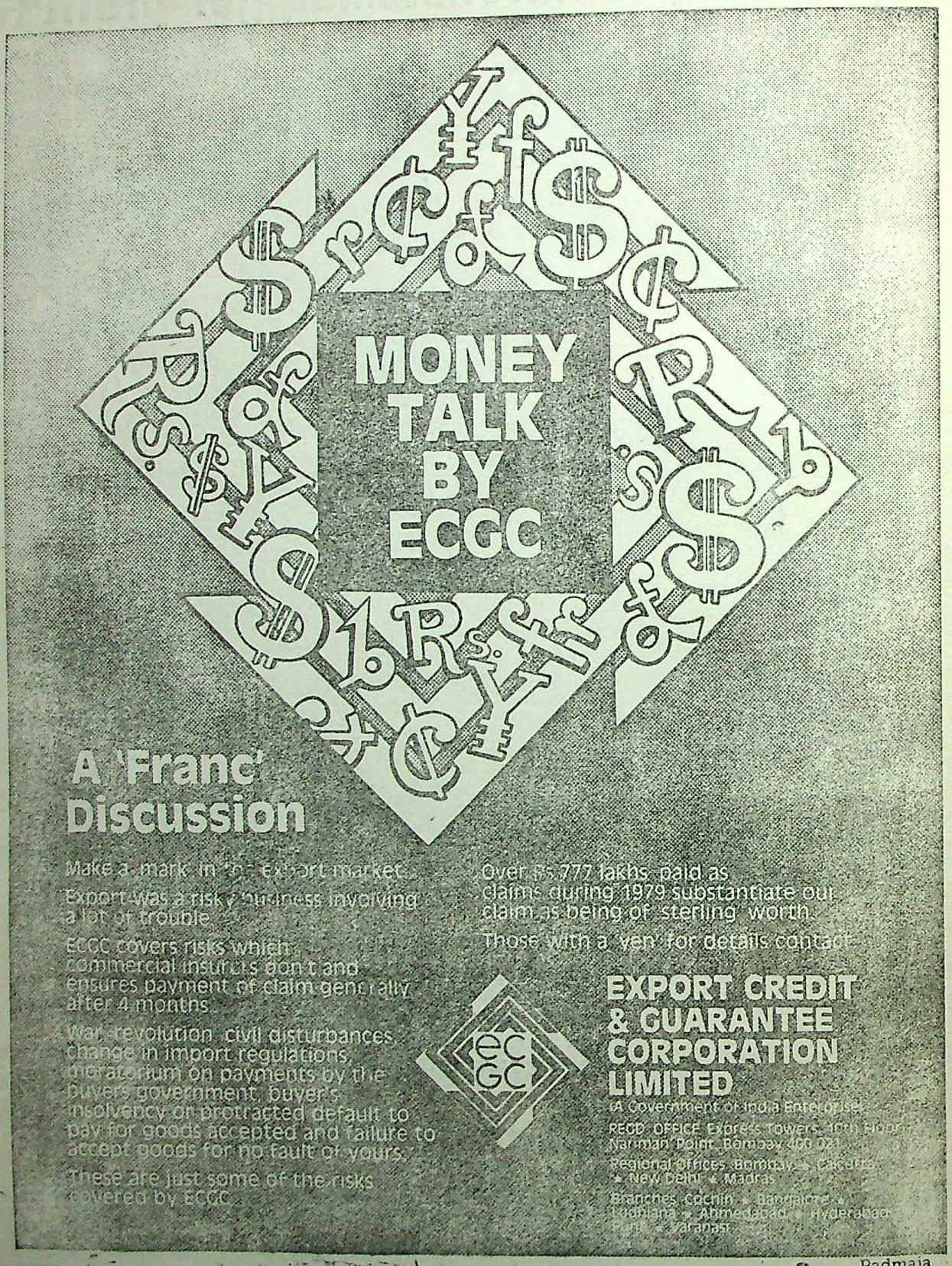
Shriram Urea ensures higher yields because :

- **Its nitrogen content is highest (46.4%).**
- **Its low biurate content assures better results.**
- **It is ideal for foliar spray, hence best for rainfed crops.**
- **It is available in sparkling, round, large size prills.**

SHRIRAM FERTILISERS AND CHEMICALS

SHRIRAM UREA—THE FARMER'S BEST AID TO PROSPERITY!

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh



CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

Indian Leatherwhere!

If you don't know which way the trade winds are blowing for leatherware, ask Lexport. They are always well informed on who wants what and where.

Lexport regularly advertises in foreign trade bulletins, participates in foreign fairs, sends out sales-cum-study teams, assists and subsidises the brand name publicity for its members, acts as an arbitrator in case of trade disputes between importers and its members, and finally, it carries on liaison work between importers and exporters on the one hand and exporters and the Government on the other.

Become a Lexport member. No matter what you produce in leather, it'll do you good to learn about fair weather markets and avoid the turbulent seas of international trading.

Export Promotion Council
for Finished Leather & Leather Manufactures
15/46 Civil Lines, P.O. Box 198, Kanpur-U.P. 208001 (India)
Telex : KEPC . KP-286 Grams : LEXPORT
Phone : 62464, 81907 (R & D Cell)

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

Dig, shovel, dump, scrape, level, bulldoze, move...

Today over 6000 earthmoving equipment, 6500 railcoaches and trailers manufactured by BEML are spearheading a great movement in the core sectors of the country's economy.

Moving men and material. Clearing the ground. Making way for progress. In agriculture, mining, irrigation, power projects and transportation.

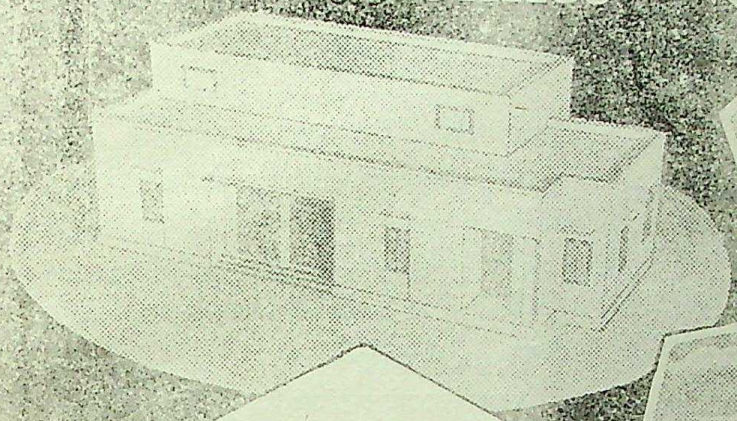
beml
a great movement

BHARAT EARTH MOVERS LIMITED
Bangalore

CAS-BEML-7827

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

NCDC helping villages to become viable economies



NCDC was set up in 1962 for planning & promoting cooperative programmes of marketing, processing, storage of agricultural commodities and supply of agricultural inputs to the farmers.

It has so far invested in the cooperative sector more than Rs. 280 crores.

Activities undertaken are multi-farious, from planning and promotion to providing expert help for smooth working of various cooperatives. Its influence is felt in every field of cooperative activity right from marketing agricultural produce to processing of Rice, Sugar, Oil seeds, Pulses, etc.; from storage (including cold storage) and distribution of food products, agricultural inputs and consumer goods to the production and supply of essential commodities in the rural areas. NCDC's many faceted efforts have provided an effective stimulation to the rural economy.

NCDC is presently fostering an idea of providing an effective servicing mechanism right at the village level, **the concept of village level focal-point godowns.** These would help the cooperatives in providing manifold services to members right at their doorsteps ! These godowns, apart from providing transit storage space for the farmers' produce till subsequent marketing, will function as **growth centres** for the rural economy. They will market agricultural produce at competitive rates, provide much needed seeds, fertilizers, implements, credit, etc., service agricultural machinery and sell articles of daily consumption at reasonable prices. The activities won't stop at that. The functions will gradually increase as the farmer realises the effectiveness of the concept. The villager ultimately may never have to look towards the towns and cities for fulfilling his needs.

NATIONAL COOPERATIVE DEVELOPMENT CORPORATION

(A STATUTORY CORPORATION)

4, Siri Institutional Area
Behind Hauz Khas
NEW DELHI-110016

GAYWAYS

CC-0. Agamnigam Digital Preservation Foundation, Chandigarh

INDIAN COFFEE

Yesterday

Indian Coffee has behind it 300 years and more of recorded history. Over the years, Coffee has been a commodity with a steady market in India and abroad.

Around 1940 Coffee was grown over an area of 74.438 hectares and the annual output was around 15,796 tonnes. There were 35,718 holdings, of which 8,694 were large and medium and 27,024 small. Internal consumption accounted for 11,635 tonnes and exports for 4,178 tonnes.

Today

The area in coffee today is 1,92,248 hectares of which the major portion of over 1,04,547 hectares are in Karnataka State, over 51,708 hectares in Kerala, over 32,909 hectares in Tamil Nadu and over 3,084 hectares in non-traditional areas of Andhra Pradesh, Assam, Orissa, West Bengal, Andamans, Madhya Pradesh and Maharashtra.

As such, holdings alone accounts for 84,366 as against the total of 90,772 coffee estates. The large holdings of 10 hectares and above account for only 2019.

Coffee production has been steadily on the increase and the present estimated production is 1,45,000 tonnes in 1979-80 comprising 70,000 tonnes of Arabica and 75,000 tonnes of Robusta which means an increase of 750% over the 1940 figure.

While internal consumption has stabilised around 49,648 tonnes exports have been increasing and in 1979-80 bringing foreign exchange earnings to the tune of over Rs. 179 crores.

This is evidenced by a comparison of the Development loan disbursed between 1956-57 to 1960-61 Rs. 11.80 lakhs and 1976-77 to 1979-80 Rs. 941.24 lakhs.

Tomorrow

A perspective plan for coffee development for the next 25 years has been drawn up by the Board taking into consideration the demands for internal consumption and export in the future. This plan will ensure a massive development of the Indian Coffee Industry during the next 25 years. The scheme will help to achieve success on the economic and social fronts since it will not only improve the economic conditions of the tribal population living in the hilly and agency tracts of the non-traditional areas of the country but also provide employment to the population besides promoting soil conservation and helping in maintaining the ecological balance.

COFFEE BOARD
Bangalore, India

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

NATIONAL INSTITUTE OF PUBLIC COOPERATION AND CHILD DEVELOPMENT

SOME IMPORTANT PUBLICATIONS

Voluntary Efforts in a Rural Community	Rs. 3/-
People's Participation in Adult Education	Rs. 5/-
School Dropout Among Harijan Children	Rs. 50/-
Young Child—An Indian Case Study	Rs. 8/-
Role and Responsibilities of Executive Committees	Rs. 6/-
Grants-in-Aid to Voluntary Organization — A Study of Procedures, Process and Problems	Rs. 10/-
Population Education of Parents	Rs. 10/-
Voluntary Work in India—A Study of Volunteers in Welfare Agencies	Rs. 60/-
Famine Relief in Bihar	Rs. 15/-
People Can Avert Famine	Rs. 2/-
Famine Relief and Reconstruction	Rs. 10/-
People's Role in Social Defence	Rs. 10/-
Community Resources for the Mentally Retarded	Rs. 10/-
School in the Community	Rs. 10/-
Family Planning and Status of Women	Rs. 10/-
Urban Community Development in India	Rs. 20/-
All India Directory of Welfare Agencies for the Blind	Rs. 8/-
All India Directory of Welfare Agencies for the Deaf	Rs. 15/-
Working Mother and Early Childhood Development	Rs. 15/-
Some Facets of Child Development	Rs. 30/-
Working Children in Bombay—A Study	Rs. 50/-

Copies can be had on payment from :

Publication Officer,
NATIONAL INSTITUTE OF PUBLIC COOPERATION AND CHILD DEVELOPMENT
Siri Institutional Area,
Opp. Police Station,
Hauz Khas,
New Delhi-110016

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

WE ARE A DISTINCT BANK

A crore of accounts—something remarkable for a bank of our size.

7th among scheduled commercial banks in India and one among the top 500 in the world, the Bank deals in international business in London with the same ease as it works for the small man in Gajraula Village in Uttar Pradesh.

We have a network of 1081 branches in 17 States and 6 Union Territories of the country. Our deposits :—more than Rs. 1300 crores and advances—over 860 crores. Priority Sector Credit : 38% (excluding export).

We are the first in Karnataka, Second in Andhra, third in Kerala and Union Territory of Delhi in the volume of banking business.

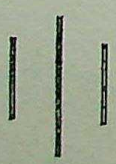
Our advances to agriculture is in the order of Rs. 101.18 crores, spread over three lakhs accounts. We are pioneers in agricultural extension work and supervisory credit.

Besides, we have sponsored 6 Regional Rural Banks in the State of U.P., Haryana, Andhra, Kerala and Karnataka which have advanced Rs. 23.59 crores through their 321 rural branches, covering two hundred and fifty thousand accounts.

Besides, we have sponsored 17 Farmers' Service Societies which have advanced Rs. 2.50 crores covering 19 thousand accounts.

We have organised 50 "Farm Clinics" in 7 States benefiting more than 20 thousand families, helping them in their all round development.

No wonder, we are a distinct Bank.



SYNDICATE BANK

CC-0. Agamnigam Digital Preservation Foundation, Chandigarh

The M. P. State Cooperative Marketing Federation Ltd., Jehangirabad, Bhopal

The Markfed helps the farmers in particular and the consumers in general through its various activities which include :

* **Procurement and distribution of chemical fertilizers at the same rate throughout the State**
* **Procurement and marketing of agricultural produce such as foodgrains, paddy oilseeds, pulses etc.**
* **Collection, storage and marketing of forest produce such as Tendu patta, Harra, Salseed etc.**
* **Procurement and supply of oil engines and electric pump sets of good makes**
* **Undertake price support operations on behalf of the State Government**
* **Supply of quality seeds to the farmers of the State**
* **Supply of quality rice processed in its 46 Rice Mills to the consumers of the State**
* **Supply of quality cattlefeed produced in its Cattlefeed Plants at Bhopal and Drug**
* **Supply of quality oil to the consumers from its Oil Mill at Damoh**
* **Supply of various kinds of Dal (Arhar, Chana, Moong, Masoor etc.) processed in its Dal Mills at Sagar, Damoh & Bhopal**
* **Supply of pesticides produced in its plant at Katni**

——: o :——

FOR YOUR REQUIREMENTS OF THE ABOVE ITEMS PLEASE CONTACT OUR DISTRICT MARKETING OFFICER AT EACH DISTRICT HEADQUARTERS

——BHARAT BHOPAL/184——

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

INDUSTRIAL FINANCE CORPORATION OF INDIA PROVIDES

MEDIUM AND LONG TERM CREDIT IN RUPEES AND FOREIGN CURRENCIES TO INDUSTRIAL CONCERNS IN INDIA

OPERATIONS AT A GLANCE (As on June 30, 1980)

IFCI has sanctioned financial assistance amounting to Rs. 1047.24 crores for 1265 industrial projects spread all over the country.

473 projects in the industrially less developed areas were sanctioned financial assistance amounting to Rs. 425.33 crores which constituted 40.6% of the total sanctions.

Industrial cooperatives, which are an effective instrument for rural reconstruction and development, were sanctioned financial assistance aggregating Rs. 166.31 crores by IFCI : 173 projects in the cooperative sector were beneficiaries of this assistance.

IFCI has sanctioned financial assistance of Rs. 92.77 crores for 194 projects promoted by new entrepreneurs and technologists.

SPECIAL FEATURES

IFCI offers concessional finance for projects in notified industrially less developed areas.

IFCI is participating, along with other all-India term lending institutions, in the administration of the Soft Loans Scheme for modernisation and rehabilitation of certain industries.

IFCI has announced new promotional schemes which are essentially in the nature of encouraging indigenous technology, ancillary industries and new and small entrepreneurs.

ELIGIBILITY FOR ASSISTANCE FROM IFCI

Any limited company or a registered cooperative society in the medium and large scale sector may apply for assistance.

INDUSTRIAL FINANCE CORPORATION OF INDIA
16 SANSAD MARG,
NEW DELHI-110001

CC-0. Agamnigam Digital Preservation Foundation, Chandigarh

MATERIAL INCENTIVES... FROM SIMPLEX MILLS.

- 100% 'Terene' Shirtings and Suitings, Sarees and Dress materials
- Cotton Voiles, Poplins, Longcloth.

ALSO AVAILABLE: FABRICS FOR INDUSTRIAL APPLICATIONS

Canvas • Ducks • Belting • Filter Cloth. As well as combined Hosiery Yarn.

The Simplex Mills Co. Ltd.
30, Keshavrao Khadye Marg,
Sant Gadge Maharaj Chowk,
Bombay 400 011.

- P.B. No. 14, Akola 444 001. (Maharashtra)
- 3rd floor, 3A Garstin Place, Calcutta 700 001.

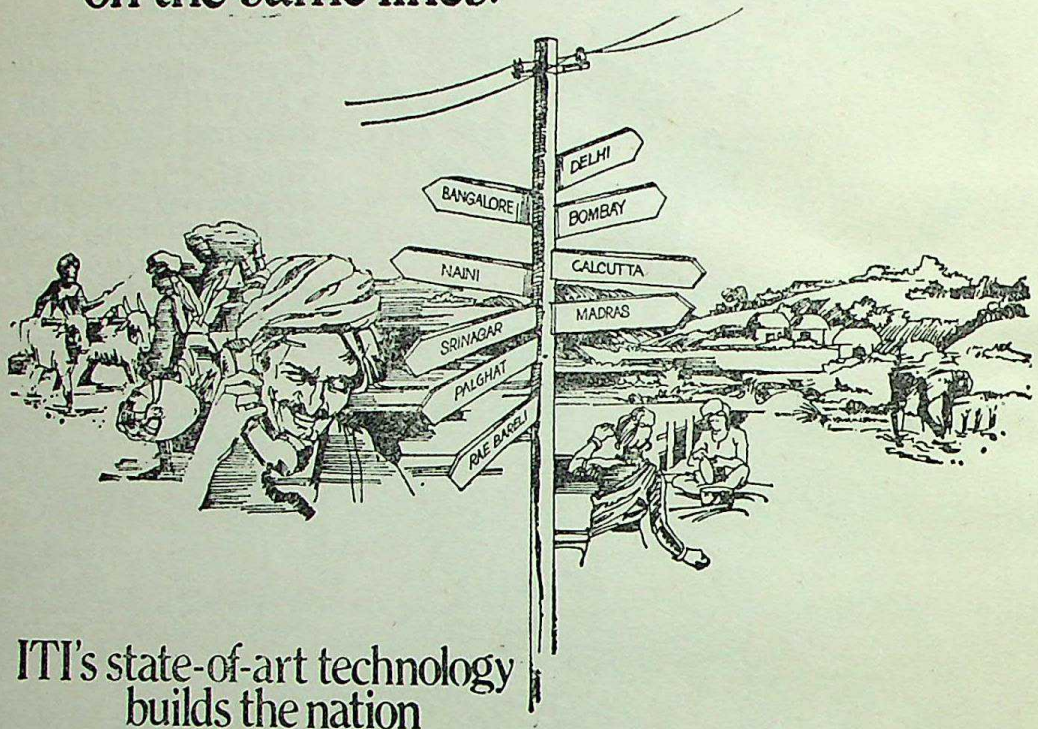
simplex

ULKA

CC-0. Agamnigam Digital Preservation Foundation, Chandigarh

For small rural centres and giant metro cities

communication begins on the same lines.



ITI's state-of-art technology builds the nation on communication.

From 85,000 telephones in 1948, India today has over 20 lakh telephones operating on some 6,250 exchanges connected by thousands of kilometres of open wire, co-axial cables and microwave radio routes.

Rapid strides in telecommunication have made India a land of shrinking distances, bringing people together.

One of the largest public sector undertakings, Indian Telephone Industries has helped to bring telecommunication to small rural centres as well as to giant metropolitan cities throughout the length and breadth of the country. From small electronic exchanges of a few tens of lines to large rural complexes of 2,000 lines using Pulse Code Modulation/Time Division Multiplexing technology. Rural exchanges are integrated into local networks by Very High Frequency and Ultra High Frequency transmission systems using Digital transmission.

ITI has also a range of medium and wideband cable transmission systems and others using Frequency Division Multiplexing/Frequency Modulated Microwave technology to cater for 300 to 2700 channels.

ITI is a massive multi-unit industrial complex, with over 26,000 highly skilled employees, and manufacturing facilities in five locations — Bangalore, Naini, Srinagar, Palghat and Rae Bareli.

Whether in the field of telephone instruments, exchanges, microwave equipment or satellite earth station equipment, ITI offers the most advanced and reliable systems.

ITI rededicates itself to strengthen the vital links of communication and serve the country with all the resources at its command.

CAS-ITI-80127

Indian Telephone Industries Limited
Bangalore • Naini • Srinagar • Palghat • Rae Bareli

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

CHOWGULE STEAMSHIPS LIMITED

Registered Office :

"CHOWGULE HOUSE"
MORMUGAO HARBOUR,
GOA-403 803.

Teephone Nos. 2229, 2291/3
Telex Nos. 0191-208/209

Operations Office :

"BAKHTAWAR" 3rd Floor,
NARIMAN POINT,
BOMBAY-400 021.

Tele. No. 234822
Telex Nos. 011-2409/3101

OUR BULK CARGO CARRIERS

M.V. "MARATHA MARINER"	DWT 64060
M.V. "MARATHA MELODY"	DWT 64060
M.V. "MARATHA PROGRESS"	DWT 38275
M.V. "MARATHA ELEGANCE"	DWT 17752
M.V. "MARATHA SHOGUN"	DWT 85507

Keep the National Flag Flying in the International Cross Trades to Earn the much needed Foreign Exchange.

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

TCS

We are in the Problem Solving Business both here and abroad :

Our track record abroad :—

* DEVELOPED AN INTEGRATED INFORMATION SYSTEM FOR BANKS IN USA
* CREATED MODIFIED VERSIONS OF COMMERCIAL BUSINESS MANAGEMENT SYSTEMS IN UK
* GUIDED CONVERSION AND SWITCHOVER TO LARGER SYSTEMS FOR A HOSPITAL IN SWITZERLAND
* DESIGNED AND IMPLEMENTED A MESSAGE SWITCHING SYSTEM FOR A UK BANK
* DEVELOPED A HOSPITAL MANAGEMENT INFORMATION PACKAGE IN USA
* HANDLED SYSTEM CONVERSION ASSIGNMENTS IN AUSTRALIA AND NEW ZEALAND
* EXECUTED SOFTWARE ASSIGNMENTS IN IRAN, S. ARABIA, JORDAN, UAE AND LIBERIA

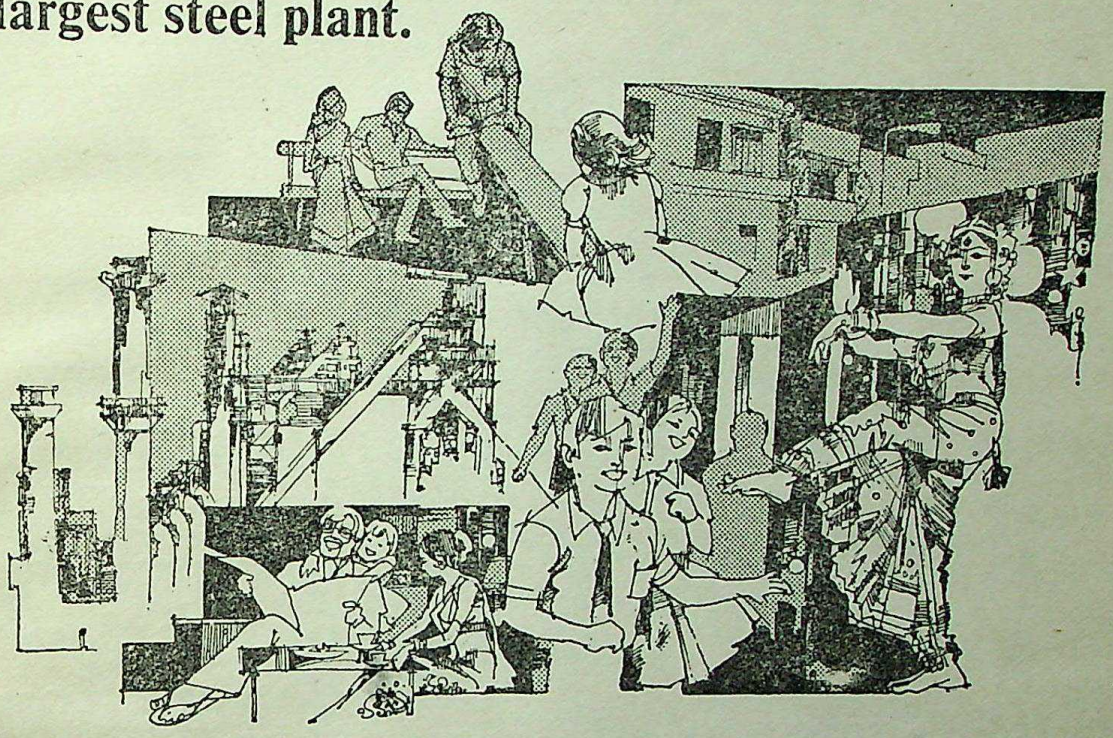
We have trained and developed over 350 young computer and management scientists to deal with complex problems.

TATA CONSULTANCY SERVICES
Air India Building
Nariman Point
Bombay-400021

Adv. 68

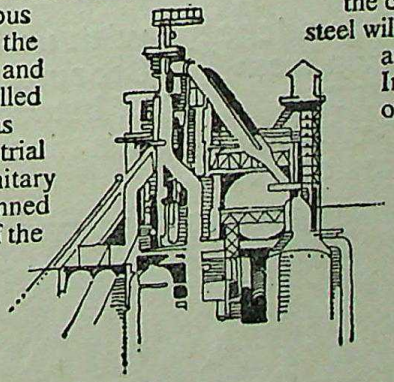
CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

40,000 people. Their families, homes, schools, parks, medical centres. And the country's largest steel plant.



In a decade and a half, Bokaro Steel has changed the face of the land

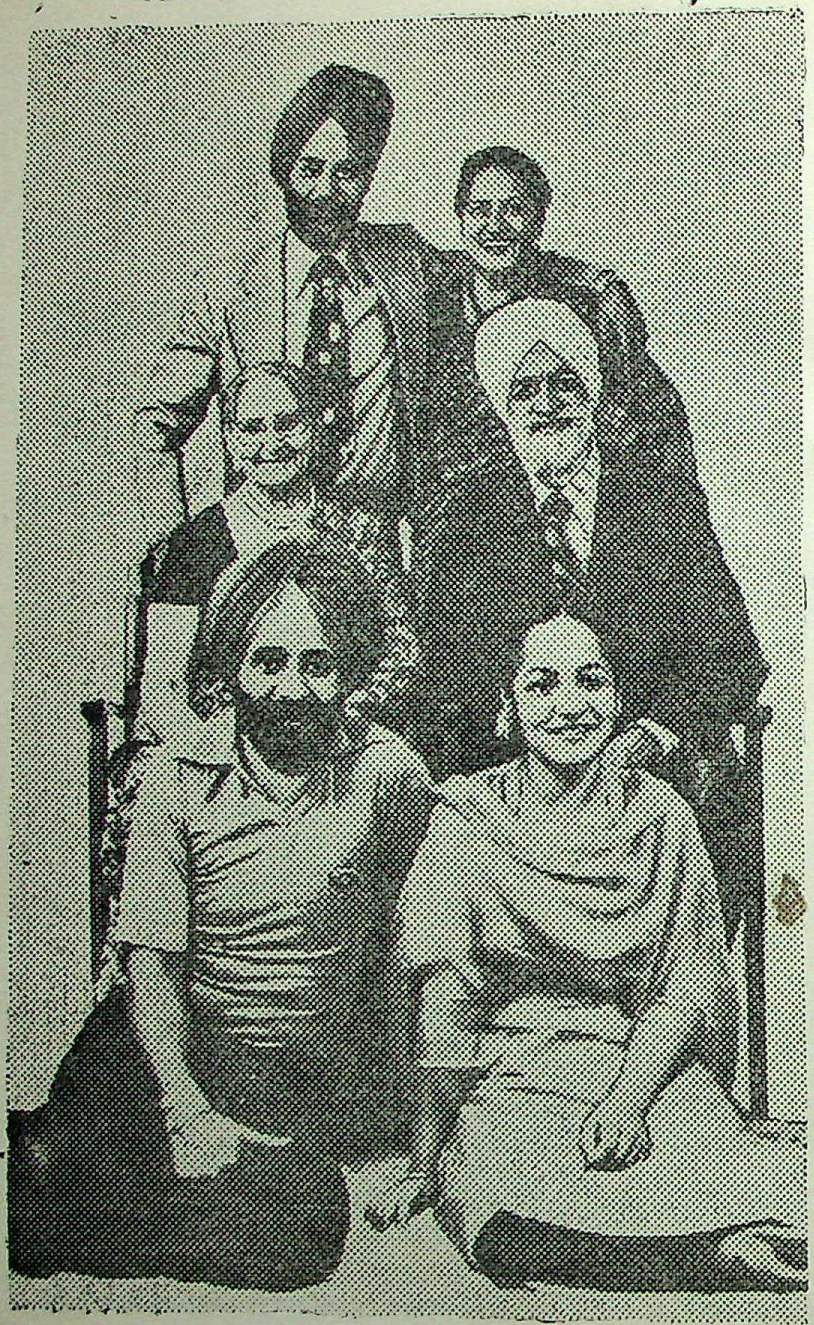
In a short span of time, Bokaro Steel has brought about tremendous socio-economic changes in the area. Yesterday's unskilled and unemployed are today's skilled professionals. Ignorance has changed to mastery of industrial techniques. Struggling insanitary villages have become a planned city that still retains much of the rural greenery.



Within the next few years, one fourth of the country's total annual output of steel will be from Bokaro. More than anything else, it will build into the Indian way of life, the foundations of a new industrial culture.

Bokaro Steel
Steel Authority of India Ltd.

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh



PSB. Growing with families for over 70 years.

"In our family there's one piece of advice that's been passed down for generations — Bank with PSB".

ASP/PSB/203-80

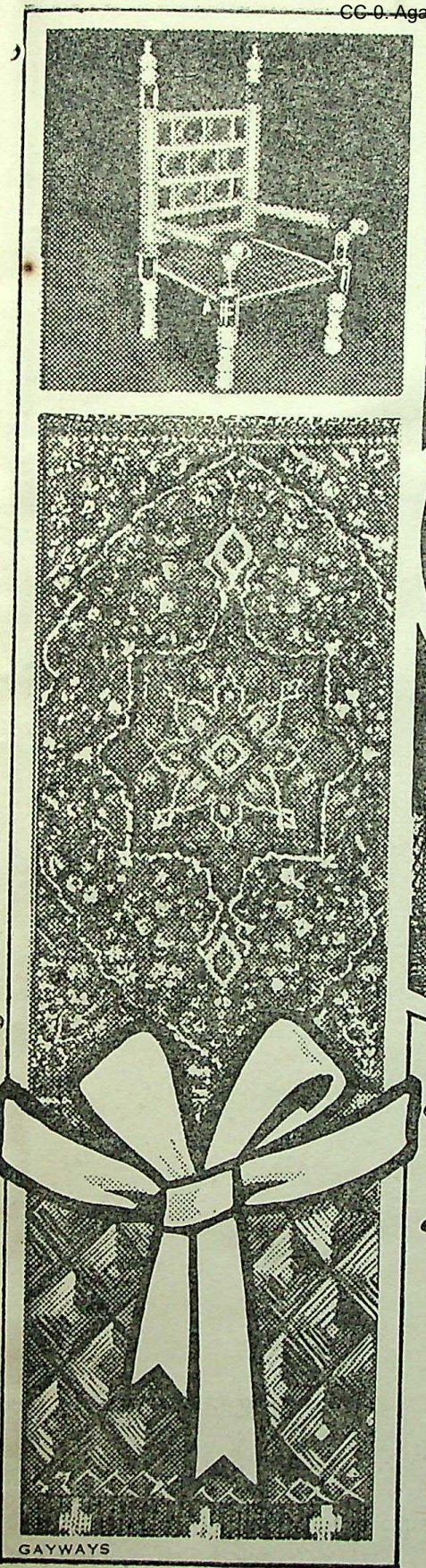
Banking with PSB is a legacy that is handed down from father to son in all PSB families—families who have grown with us, and stayed with us. For over 70 years. Because we have traditions of banking service very few can match.

PSB—The name of total banking service

PUNJAB & SIND BANK

(A Government of India Undertaking)

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh



phulkari

punjab govt. emporium

A showroom to tell the story of Punjab, its colours and customs, its moods and manners, its life and likings, its arts and crafts. Through this showroom you will get a better perspective of the real Punjab—the Punjab that is progressive, industrious & humming with life.

C-6, Emporia Complex, Baba Kharak Singh Road, New Delhi-110001.

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

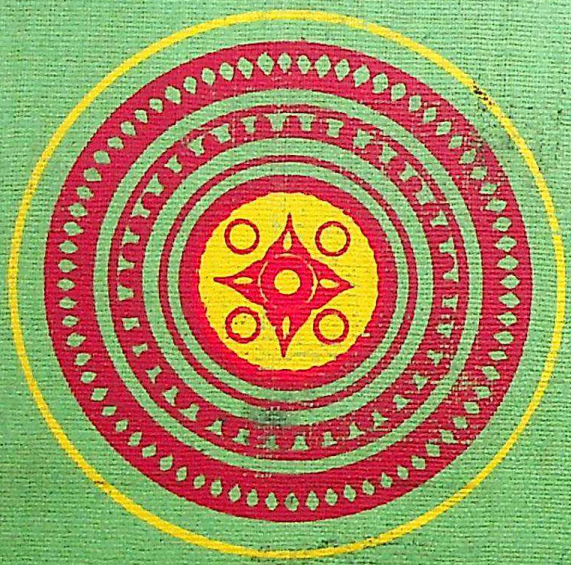
PRINTED BY THE MANAGER, GOVERNMENT OF INDIA PRESS, FARIDABAD-121001

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh



PUBLICATIONS DIVISION
MINISTRY OF INFORMATION AND BROADCASTING
GOVERNMENT OF INDIA